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Employee Training in Wide-Spread Organizations

BY R. O. BECKMAN, *The Psychological Corporation, New York*

Mr. Beckman reviews the basic factors and various techniques involved in setting up a job training program. Although the reference is to wide-spread and chain organizations, the approach is sufficiently comprehensive to apply at least in part to any business organization. The author has chosen illustrations from procedures in a large number of representative companies and has drawn freely upon his own experience as Personnel Director for the Kroger Grocery and Baking Company, Scott-Burr Stores Corporation, and Wise Shoe Company.

ORGANIZED employee training in business has proved its dollar and cents value. First recognized as a vital factor in business management not much more than twenty years ago, the problem of developing the potentialities of employees has commanded increasing attention during the past decade. The shift from small units to great corporations, with an ever widening gap between management and workers in understanding the essentials of their common enterprise, has also accentuated the training need.

Despite curtailment in personnel activities on the part of firms forced into drastic economies during the past four years, some sales and distributing organizations have recognized that greater skill than before is needed to maintain and develop sales volume. Neither superior merchandise, lavish advertising, costly store fronts, nor enticing displays will move stock from

shelves or counters unless salespersons are properly trained in selling. No matter how plentiful the supply of workers nor how carefully they are selected, employees on any type of work cannot perform their duties satisfactorily or economically without adequate training.

Although there is as yet little indication of an extension of personnel and training procedures throughout industry as a result of the National Industrial Recovery Act, there is reason to assume that higher wage costs and new, formalized employee relations will inevitably encourage employers to devise a systematic plan of educating and informing their workers in matters of business economy and operation. Executives who desire the genuine coöperation of all members of their organization in working towards industrial recovery will seek to admit them more largely to a partner relationship, which is fostered

by employee training procedures. The new codes may thus be expected to stimulate the training movement.

THE SITUATION IN FAR-FLUNG MERCHANDISING ORGANIZATIONS

During the ten years following the world war, millions of dollars were spent in training employees engaged in manufacturing processes. Although attention on the part of executives is now definitely centered on problems of consumption and distribution as contrasted with those of production, relatively less consideration has, on the whole, been given to intensive training in the merchandising field. Department stores have, of course, stood out in the development of training programs and a few nation-wide wholesale distributors have devised systematic plans for training their salesmen. It will be conceded, however, that the chains, in their attitude towards the adoption of standard practices in the broader field of personnel and human relations, have with a few exceptions, lagged behind. If a survey of the chain field were made, many operators would claim that they "have a training plan." Ask for details, however, and most of them would be forced to admit the absence of a definite, systematic, and standardized program supplemented by written manuals of procedure.

Many wide-spread organizations, among them some of the oldest, still cling for the most part to a "sink or swim" attitude with regard to their employees. New workers in such firms are usually hired and then left to work out their own salvation. A new and willing sales clerk put to work without adequate instruction or sym-

pathetic understanding on the part of his manager frequently finds himself out of a job in a few days. A trainee placed under the first store manager who needs an assistant, without reference to the latter's ability as a trainer of men, is as likely to fail as to succeed. A common employer attitude with reference to men employed for prospective managership is expressed in the advice: "Work hard and some day you'll have a store of your own." A glowing description of opportunities for promotion is frequently directed at a new employee, but there is all too commonly no program specific enough to guarantee him the advancement to which he may well be entitled.

A TRAINING PLAN AS A BUILDER OF MEN

Few business leaders will deny that an outstanding task and obligation of industry is the building of men. The "new deal" in the power age involves the development of all-around and more effective personalities, the cultivation of judgment, initiative, and resourcefulness. The achievement of this objective necessitates personal development and education in the broader sense, in addition to the specialized processes of job instruction with which we are here concerned. It may be pertinent, bearing this objective in mind, to suggest that much of the criticism of big business grows out of the regimentation of human conduct which this type of organization inherently and unconsciously encourages. "Machines, robots, chain slaves, shoe-dogs," and other similar expressions are used all too frequently to express the belief that chain employment dehumanizes, that it neglects the social aim of building men of individuality and

character. Training programs of the right kind are a specific antidote to both labor propaganda and inherent potentialities of evil.

Some chain executives unfortunately fail to recognize that the building of men is not simply a matter of hard work and time spent on the job. Conditions today are quite different from the days when "the old man" opened his first store and made good by working eighteen hours a day. A chain executive of the self-made type certainly desires other outstanding men in his organization, but there is no logic in an entire organization made up of outstanding individualists like himself. The "average" man who finds work in a large and far-flung organization today, one in which standardization frequently tends to restrict initiative, needs systematic assistance to forge ahead as fast as the company would like to have him, to say nothing of his own desires. A garden plot, planted with the best of seeds, cannot be expected to produce strong, healthy plants and a large crop without intensive and scientific cultivation. Human beings starting on a new job require even more atten-

PRECISE TECHNIQUES NEEDED TO PRODUCE RESULTS

Just as there is need for the application of science in gardening, so there is a place for the science of education in the training of employees. A satisfactory training program needs to be developed scientifically, built up on a basis of specific facts and needs. The training program must be definitely planned, actual training must be undertaken on an experimental basis and

the best procedures ascertained, the plan must be followed up systematically, and operating supervisors must be trained to teach their subordinates. The man heading the training activity should understand the principles of pedagogy—a type of knowledge quite different from that of merchandising or office management. In the absence of an organized training program based on sound teaching and psychological concepts, the new employee is subjected too largely to chance and invited to lift himself by his boot straps.

If the present status of training among wide-spread organizations is examined with reference to any specific company, let the executive ask himself the following questions: Has my training program definitely shortened the period required to learn the job? Has it enabled my employees to increase their earnings? Has it decreased expense? Has it decreased labor turnover? Has it improved sales volume and service? Are the workers better, happier members of society than they were? Is my training program as specifically written up as, for example, my store operating instructions? These questions are, after all, the tests by which the success or failure of any training program must be evaluated. Unless an executive can give an affirmative answer to most of them, his alleged "training program" may perhaps be suspect.

THE RELATIONSHIP OF SELECTION STANDARDS

In evaluating the success of any training plan, it is important also to bear in mind the type of employees recruited. A more intelligent worker or one with a better background of ex-

perience will obviously be more easily trained and more likely to succeed. Improved methods of selection should go hand in hand with the inauguration of training procedures. To quote from "Industrial Discipline" by Professor Tugwell of Columbia: "When there is no attempt to predict the success of job applicants through precise selection, many inefficient ones must be tried and weeded out. This is costly both for industry and the individual. The industry has lost the difference between the efficiency of a good man and the inefficiency of a poor one. It has also wasted time and money in his training; and the employee has lost the time which might have been spent in getting started at a more fitting task and has suffered the humiliation of failure and discharge." Improved selection can do much, but the best of raw material may be spoiled in the processing.

SUPPLEMENTARY TRAINING IN BUSINESS MANAGEMENT

Many firms (largely outside the chain field) are engaged in general educational activity or Americanization programs and offer courses of study of a cultural nature, frequently in conjunction with schools and colleges. The present discussion, however, centers on training as a learning process of value in meeting definite commercial situations and in assisting employees to acquire skill in the specific operations of a given business enterprise. Such specialized training may be supplemented by a few subjects of a more general nature commonly taught to good advantage in a training program. Among these are

the history, financial position and organization structure of the company; its competitive position in the field; information regarding the source and processing of merchandise; inspection, packing and distribution of products; public relations; psychology of salesmanship; advertising methods and policies; and uses to which a line of company products may be put. Education of this kind is of course definitely effective in developing an appreciation of basic economic principles and an understanding of the fundamentals of business management.

A prerequisite to a satisfactory training program for the development of job skills is the preparation of manuals of standard practice and written job analyses. Insofar as possible, all standard operating procedures should be reduced to writing for ready reference in connection with training and management. Nearly all chain organizations have their operating manuals, but few have developed detailed manuals for sales clerks, stock men, and other types of employees. Many firms issue a brief handbook of general information to incoming employees explaining the company's policies and outlining in a general way the steps in the company's training plan. These may hardly be termed "standard practice manuals," however.

GEOGRAPHIC AND OTHER FACTORS DETERMINE THE PLAN SELECTED

Specific types of training programs used with success by chain stores or large distributing organizations vary widely. The selection of the particular plan or procedure is usually dependent upon the geographical distribution

of the operating units involved. No specific plan can be transplanted bodily from one kind of firm to another aside from the fact that each company has its own peculiar problems. The training plan of a company with a large number of branches located in metropolitan centers must necessarily be quite different from that of an organization spread half way across the continent with isolated units in a large number of small towns. The caliber or type of men or women to be trained is another important consideration. It is apparent that the same program will not be appropriate for the training of service station attendants employed by an oil company and for the development of men in training for managership in a department store chain.

A plan for the intensive training of college graduates, an increasing number of whom are proving their worth in the chain field, again requires a special type of approach. Methods of training selected must also take into consideration the hours of work. A training schedule cannot be too burdensome in case a great deal of night work is involved in the daily job. In New York City, for example, most outlying chain stores (except food stores) are open six nights a week. It is, therefore, difficult to schedule training classes during working hours without a more or less involved system of relief. The training problem in any far-flung organization is more complex than that which may be set up for a single department store or factory.

The size of the organization and the number of units operated naturally affect the training need, the amount

of money which can be appropriated for training, and the scope of the program set up. No matter how small the firm, however, there is still need for some kind of specific plan for training employees. The plan should be put in writing and systematically administered under the supervision of the personnel manager or some qualified person in the operating department.

GROUP OR INDIVIDUAL TRAINING?

WHO SHALL BE TRAINED?

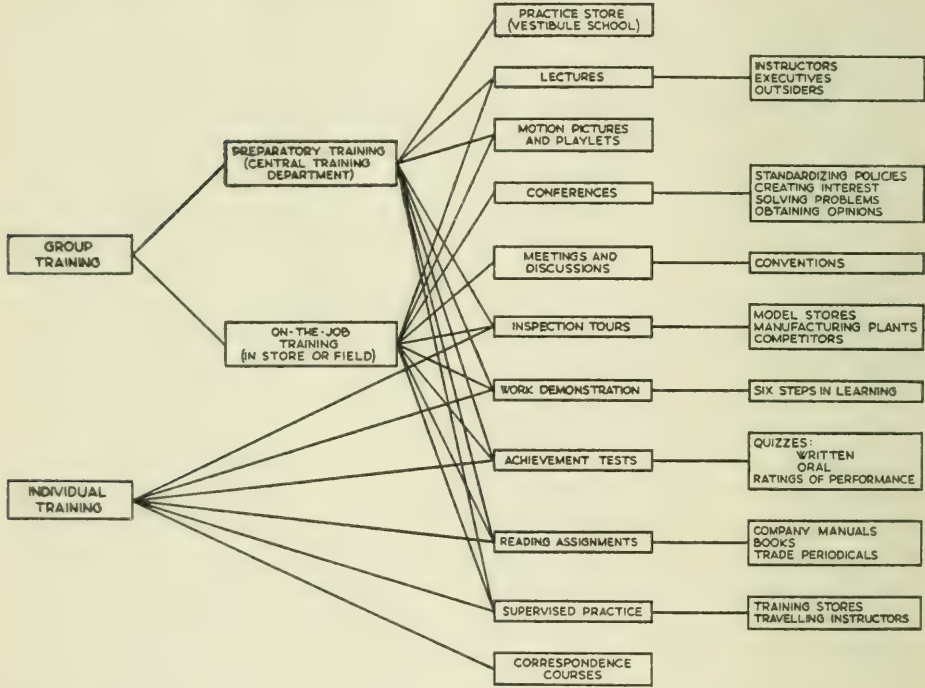
The two major categories into which training programs may be divided are those which provide for group training and those which must rely upon individual instruction. The two necessarily overlap to some extent in practice. A chain with a number of units in metropolitan centers may employ a plan of group instruction for its trainees in those centers and rely upon individual instruction, in part through correspondence, for trainees stationed in remote territory. Either group or individual methods may be used for breaking in new employees or for furthering the development of experienced workers. Far more attention has of course been given to the training of new employees, but in many organizations it is quite as important to conduct a continuous program of education for old employees in order that they may keep abreast of the times.

If it is desired to conduct a training course for a group of experienced employees, who should be privileged to participate? In general it may be said that any employee in the work group who is sufficiently interested in the company's welfare to improve his knowledge and skill should be ad-

mitted to the training class. In some situations, however, it may be imperative to restrict the size of the group because of practical considerations—either by choosing those who appear to have the best chances of benefiting by the course and of advancing with the organization, or, perhaps, by selecting those in greatest need of

rating scale was devised. This scale rated the candidates on thirteen traits, including such factors as speed of mental reaction, ease of learning new tasks, understanding of directions, accuracy in sizing up situations, teamwork, etc. From a tentative list of fifty possible students, the highest fifteen were then enrolled.

EMPLOYEE TRAINING METHODS IN THE CHAIN FIELD



additional training. If a selection must be made, it is usually inadequate to base the choice solely upon sales or production records: the use of a reliable employee rating scale is desirable. In the case of a local chain desiring to inaugurate an advanced course in merchandising for those managers and clerks regarded as potential executive material, a special

SPECIFIC METHODS IN USE

The remainder of this review will concern itself with a brief discussion of specific types of procedure used by representative chains throughout the country. Most of the programs which are in effect deal with the training of student managers, since it is here that the greatest training need has been felt.

Reference to the accompanying chart will reveal training methods which have been used with more or less success in meeting both centralized and decentralized situations. Both group training and individual training procedures are shown, while some are suitable to either type of instruction. Nearly all comprehensive training plans combine two or three of the methods shown. Let us consider each method in turn, note briefly its important essentials and see in what kind of situation it has been applied effectively.

The practice store

The practice or model store was one of the earliest types of training to which attention was directed, largely because of the success of the "vestibule school" in manufacturing industries. The vestibule school, as its name implies, was a small section of a factory set aside to train workers in specific mechanical processes under special supervision before they were assigned to production. Attempts have been made to apply this idea to the chain grocery field, and in some cases practice stores were set up in the warehouse for the pre-training of student managers. Although certain facts can be learned about merchandise and store keeping in this way, such an expedient is so artificial that, removed from the customer environment, the practice store of this type is of little practical value.

The principle of preliminary instruction in groups has been applied effectively in large department stores for the training of sales clerks and to the training of extra help in metropolitan

chains, but here the instruction is largely of the lecture type. The instruction furnished in such classes has been confined for the most part to procedures involved in filling out sales slips, credit memoranda, and other operating forms. Considerable success has been achieved by chains in designating certain stores as training stores, but these are operating units and not exclusively training centers. They are considered under "Supervised Practice."

The lecture method

The plan of having a company executive, an instructor, or an outsider give talks on specific topics before meetings of employees is one of the oldest training methods. This procedure is open to the general criticism directed at any lecture, that those in attendance remember very little of what is said. The speaker's delivery may be poor, the material badly organized, or there may be a failure to make the topic interesting enough. In consequence it does not "get across." Every executive will recall talks given on the selling floor by executives, section managers, stylists, or specialists, which have not succeeded in their purpose.

Even though the lecture method of presentation has its shortcomings, it is of definite value in placing certain facts or propaganda before large groups of employees, particularly in connection with sales talks of inspirational value. The lecture method must also be used in group instruction of beginners to whom it is desired to convey certain factual information. Useful and interesting talks have been

given, for example, to groups of food chain employees by specialists of various kinds, executives from the production departments, bakers, coffee roasters, produce men, and dieticians. The lecture plan has also been used with success in the variety and drug fields. When supplemented by other forms of instruction and carefully planned, it has its place in a training program.

The conference method

No method of instruction has been used to a greater extent than what is loosely called the conference method. The technique of the true "conference" is quite different from that employed in the lecture or informal group discussion. A properly planned conference involves organized discussion and is an exercise in concerted thinking. It requires an honest effort on the part of a relatively small group of persons who get together to exchange ideas in the attempt to arrive at an opinion or decision which cannot be reached readily by the members of the group individually. Manufacturing organizations have used this method for many years in training foremen.

The conference method is suitable for a number of objectives. It can be used to solve a problem and decide on a suitable course of procedure, to ascertain a trend of thought in a given field, to create interest in a given subject, or to create and maintain uniformity of interpretation of policies or principles. Results cannot be expected if more than 15 or 20 persons are in attendance. This method is obviously not adequate for the training of student managers or those new

to the operation of the company. Its usefulness is restricted to meetings of experienced workers, more especially executives or supervisors.

At first glance, it would appear that anyone could organize a successful conference, but success depends upon many factors. The facts to be considered have been ably summarized by Mr. A. B. Gates of the Eastman Kodak Company as follows: (1) the conference must have a well defined purpose or objective; (2) the conference must involve discussion material within the experience and knowledge of the participants; (3) the conference must be planned; (4) the conference must be so led as to secure constructive participation and to keep the discussion on the subject in line; (5) the conference must reach its objective; (6) finally, if benefits are to be derived, results must be developed and summarized so that they can be utilized. It is all-important to secure the right leader, and a conference leader requires considerable training in technique.

An important aspect of conferences is their influence on morale. Employees given an opportunity to express their opinion in a conference are definitely stimulated to greater effort in consequence. Participation in a conference engenders a wholesome feeling of participation in management which is beneficial to any organization.

The conference method as a means of entertaining trends of thought and of consolidating an organization behind a new idea has been widely used in sales meetings and in meetings of executives where questions of policy are discussed. It has been used to a

lesser extent but with definite success in the training of chain store managers.

In the case of a large grocery chain, the fifteen or twenty managers under each supervisor were brought together every two weeks after hours. Each meeting was devoted to a discussion of a specific topic, such as planning the work of the store, history and development of the chain idea, displays, ordering merchandise for the store, rotating stock, retail balance, eliminating shrinkage, controlling produce losses, getting the most out of the company's advertising, etc. The supervisor was provided with a concise written outline and guide for conducting each meeting, but each man present was expected to participate in the discussion and contribute his ideas. The discussion was definitely guided to a conclusion which was supported by all members of the group. In order that each manager might be in a position to refresh his memory regarding the discussion, he was supplied, at the close of each meeting, with mimeographed notes covering the important items of discussion.

The procedure described in the foregoing paragraph may be termed a "controlled" type of conference. Its general effectiveness is as definite as in the conference in which each member of the group has a voice in determining the decision reached. In the foregoing illustration, the material supplied the supervisors and managers was carefully developed in advance through experimental conferences with other groups. Each preliminary group arrived at the same conclusions, since the topics discussed concerned themselves not with major policies, but

with the best methods of handling a specific store operating job.

Such a specialized type of conference procedure is of great value in "getting over" to an organization a special sales campaign or sales drive. In one instance it was found possible through such stimulation to dispose of six cars of citrus fruit and permanently to increase the sales of that item in a district which had never sold much fruit before. In another case, it was found that the average sales per store increased by as much as 70 per cent in the course of organized conferences. The conference method offers attractive opportunities for results, but involves technical operating difficulties not apparent on the surface. It needs skillful and experienced direction.

Meetings and discussions

Group meetings and informal discussions of operating problems are common in nearly every business organization where a sufficient number of the employees concerned can be brought together at any one time. Large sales distributing organizations as well as certain chains are accustomed to bring their salesmen together once or twice a year in conventions. In the ordinary type of meeting it is common to discuss a considerable number of different topics and to conduct the proceedings in an informal manner. This serves to distinguish the meeting as a training method from the true conference which should be restricted to a single topic and the procedure for which should be definitely planned and controlled.

The branch managers of any widespread firm would be greatly benefited

by further opportunities for contact with one another, although many chain operators, without appreciating its effect on *esprit de corps*, ruthlessly discourage such intercourse. Meetings as a part of training have been restricted for the most part to chains with a number of stores in metropolitan centers, the managers of which are brought together every week or two at headquarters. Combined business and social gatherings have been used in some instances but ordinarily not much real instruction can be imparted at such affairs even though entertainment features may bring out a large attendance.

Motion pictures and playlets

Potentially there is probably no more valuable agency for use in training employees than the motion picture. Most of us are eye-minded, and we learn far more readily by seeing the details of our daily task on the screen than we can by hearing them discussed by a speaker or even by reading about them on a printed page. Not only can a job be systematically broken down and analyzed in motion pictures, but a vast store of other practical information can be imparted in this way. A motion picture designed to supply instruction for shoe salesmen on orthopedics and another demonstrating the process of tanning leather and manufacturing shoes would be of great value. Pictures showing the source of coffee, tea, spices, cocoanuts, fruits, vegetables and cereals would be most helpful in grocery training. There are unquestioned possibilities in training sales clerks in methods of

approaching and dealing with their customers.

The main obstacle to the adoption of the motion picture as a commonly accepted training medium is the cost of producing the films. Ordinarily each company must prepare its own special film, though there is no reason why a number of firms in different territories should not cooperate. Unless an organization is large, has a considerable training problem, and can bring together in convenient locations the employees that need to be trained, the expense of producing special films is prohibitive.

Nation-wide sales organizations are making increasing use of training films. A large soap manufacturing firm has met with considerable success in coaching its salesmen in the work of assisting retail dealers. Automobile sales organizations have nearly all, at one time or another, made use of talking pictures. The film has been especially popular in bringing the picture and voice of the head of the organization to members of organizations so widespread that it would otherwise be impossible for the employees to see him in person. Such films have been largely inspirational in their nature.

Another useful device in visual training is an improvement upon the old magic lantern by which photographs, charts, or printed matter are thrown from a slide onto a screen. These slides are an invaluable adjunct in the lecture type of training.

In some chain organizations occasional use has been made of the playlet or sketch illustrating certain problems with which employees are confronted.

As an occasional interest rouser, this method has its use, but it is seriously limited by the amount of time involved in preparation and the ever present possibility of a poor performance on the part of inadequate performers.

Work demonstration

A specific plan for demonstrating the steps or processes involved in the work content of a given job is essential to any training program. Demonstrations of actual job situations, involving the handling of merchandise, equipment, or tools, may be "staged" before a group of employees undergoing preliminary training more economically than in individual training. Information supplied in the course of lectures, such as that indicating the filling out of sales checks or order forms, for example, or the procedure involved in refunds or similar tasks must be reinforced by actual detailed demonstration. Successful demonstration includes a great deal more than the ordinary practice of "picking up a job" by watching someone who himself absorbed it in that way from his predecessor.

Demonstration is only one of the factors in the training-on-the-job situation. Six steps are involved in teaching a learner to perform a given task. (1) The trainer should first perform the operation, explain the process or go over the sales talk, making sure that the explanation is simple. Only a small assignment should be learned at one time. (2) The learner should next repeat the work which he has seen demonstrated. (3) Next, the trainer should criticise the learner's

attempt, emphasizing the right way without unduly stressing the wrong way. (4) After this, the learner should again repeat the training assignment. (5) Successive repetition of these steps should be carried on until satisfactory results are obtained. (6) Finally it is essential for the trainer to follow up the work of the trainee from time to time. Every supervisor engaged in training should understand thoroughly the principles involved in the learning process. He should be friendly and patient and above all, he must "follow through." Observance of the foregoing points will eliminate many failures and will make it impossible for a beginner who has failed, to say: "Well, all the boss did was to give me an apron and tell me to get to work."

Inspection tours

Visits of inspection to headquarters offices, warehouses, model stores, or manufacturing plants are a valuable adjunct to a training program. Ordinarily such tours should be conducted in small groups and even though a group training plan is not primarily employed, it is frequently possible to bring learners together for trips of this kind. The beginner who has an opportunity to go through the main or branch office of his firm with a guide who can explain the various departments and operations is greatly benefited. It is particularly helpful if the "big bosses" are on hand with a friendly word. If the company is engaged in manufacturing or processing, an inspection of the production, shipping, warehousing, or other methods

used helps to sell him on the product. Employees of food or restaurant chains may be taken to the bakeries and other production units. Every chain has a number of model establishments to which it points with pride; visits to them by learners can be made both useful and stimulating. A number of chains in various fields have adopted the policy of having groups of managers make periodic inspection trips to certain of their stores.

Supervised practice

The plan of assigning learners to one of a number of specially selected operating units, designated as training centers, is the one most commonly found in the chain field. The effectiveness of this training method, however, varies widely both among and within the chains. It is not sufficient to assign a trainee to a store operated by a successful manager of long experience; while he may be a satisfactory operator, he may be utterly incompetent to train and develop learners. Organizations which have embarked on systematic training programs have found that only a small part of their supervisors are qualified to do a good training job. The training store manager needs first of all to be trained for that work. Since it is common economy to employ trainees on routine store operating work at the same time they are obtaining their training, a considerable number of beginners must necessarily be assigned at times to stores which are really not training centers. This emphasizes the importance of rotating trainees among various units so that during at least

a part of their training they will receive proper instruction. The earlier in the course of their employment they are placed under a good training supervisor, the better. In order to offset the incompetence of certain managers as trainers a few chains employ training supervisors or travelling instructors who supply the gap in the learner's training program resulting from this fact. Junior department store chains successfully employ women instructors who travel from store to store as needed, to train sales clerks and cashiers. The depression has demonstrated that this practice is too costly in a period of slack sales, however.

Certain large firms in the grocery, restaurant, shoe, and variety lines have adopted a systematic plan of centering their training activities in selected training stores. In metropolitan centers this method is sometimes supplemented by group training and classroom instruction.

Rather remarkable results have been achieved in some instances in shortening the length of the training period through standardized practice training supervised by a central training department. The development of such a plan, however, involves considerable research work, the preparation of specific plans and schedules, and of written outlines. One well known chain now turns out successful meat cutters in sixteen weeks' time, a project which would have been ridiculed by almost any butcher a few years ago. Of these sixteen weeks, twenty-nine days are spent in the classroom and sixty-nine in the markets.

The size of each training class is limited to twenty; the school is located in branch packing plants where a course of group instruction is conducted on certain days during the training period. A training certificate is awarded to the apprentices who successfully complete the required course of study. In order to assist in overcoming the numerous obstacles involved in training a group of managers qualified for instruction work, the training department of this company has prepared very comprehensive instructor outlines including extensive analyses of the job processes involved.

Another interesting training venture undertaken by a grocery chain involves the training of learners for store management in the course of a ten weeks' training program, even though they may not have previously engaged in the grocery business. This program provides little group instruction, but relies upon supervised practice in selected training centers, supplemented by precise training manuals. In the course of the ten weeks, attention is directed to the following topics in the order listed: introduction to store and stock; preliminary selling instruction; maintaining good store conditions; ordering and receiving merchandise; merchandise information; sales, displays, and advertising; records, reports, and accounting; ordering, handling, and selling produce; and the manager's place in the community and company. Following the completion of systematic basic training, a student manager is given an opportunity to serve as acting manager in a store in which the regular

manager acts the part of supervisor for the week. Here the student's ability is tested and misunderstandings are uncovered.

Certain variety and restaurant chains have used the plan of sending out trainees for a final training period of one or two months to larger stores which serve as major training centers. The managers of these units, in consideration of the extra help thus provided, are expected to make sure that each student manager has learned all phases of the company's store operations. They have considerable to say regarding the trainee's fitness and readiness to operate a store of his own.

Reading assignments

A customary assignment for learners in every chain or large distributing organization is the careful reading of the company's operating manuals and of general orders, bulletins and sales promotion circulars issued from headquarters. It is important that material of this kind be systematically routed to trainees, and a definite plan for studying the material must be outlined. Store manuals, especially if mimeographed, frequently number several hundred pages. They are usually inadequately indexed and the mere reading of page after page, without systematic study, results in confusion. Preliminary training material sent to the learner should give him specific advice and suggestions on how to study and how to remember what he has read. In some instances useful training material has been distributed through company magazines. This may, of course, give publicity to some

of the company's confidential policies and is subject to the further criticism that such material is frequently not kept for permanent reference use. To be of value to subsequent trainees, reprints must be preserved.

Increasing attention is given by a few chains to supplementary reading of general value in developing a trainee's understanding of business management, merchandising principles, and personnel procedures. The trainee's manual of one chain requires as a qualification for managership, that at least five recommended books be read in the course of training. A bibliography of several pages from which the student may make a selection is incorporated in this trainee manual. Since few of the books listed are found in small town libraries, the company mails volumes as required from its own reference library. The supplementary readings deal with store keeping, with the fundamentals of marketing, merchandising, and displays, and with the development of personality and personal leadership in business. The importance of such reading (particularly in a time of economic change) in broadening the knowledge and vision of outstanding younger men cannot be overestimated.

Correspondence training

The most difficult of all training situations is doubtless found in the widely scattered chain where ordinary group instruction is a physical impossibility, where preliminary or pre-job training is impracticable, and where even supervised practice—because of inequalities in training capacity among the managers—offers many

difficulties. In such a situation it is feasible to develop a carefully devised plan of training largely by correspondence, somewhat along the lines of the courses offered by various correspondence schools. The problem of teaching by correspondence is complicated in some organizations by the fact that trainees of various degrees of experience are employed. These may, therefore, qualify for management in from three months to three years, depending upon their previous experience. Accordingly the training plan must be sufficiently flexible to permit those of some past experience to take it up at the desirable point.

Although a number of firms have for many years employed what might at first thought be termed correspondence methods, most of these plans are neither exact nor comprehensive enough to be so entitled. As far as is known, there is no chain which has in effect a long distance training program comparable in form and content with any of the extension courses offered by leading universities or with the material used by the better class of correspondence schools.

At least one company, however, is developing a systematic training plan which will in time make such a comparison possible. Good results in the form of reduced turnover, better satisfied trainees, and better trained managers are already in evidence after less than three years' operation of this training program. The plan involves the following essentials:

1. Systematic study of operating manuals of the company, such as the store managers' manual, a stockman's manual, sales clerk's manual, and a superintendent's

manual. These give a detailed description of company operations and serve as the basic textbooks for the course.

2. Each trainee understands that he is expected, on the basis of his past experience and other qualifications, to be ready for store management within a certain specified time. This period varies for different trainees. He is then supplied with a definite training schedule which sets forth in detail how many weeks or months he must spend on each type of store work, stock room, sales floor, office, displays, etc. If a trainee fails to make the progress expected or does not keep abreast of his schedule he is either required to take a longer period or is dismissed.

3. Each learner is supplied with a trainee's manual prescribing the various tasks he must learn, the form of reports required and supplementary reading references required. This manual is in no sense an operating manual: it merely furnishes the trainee with systematic information as to how he may get the facts and experience required in the course of his training.

4. From time to time as the learner completes various steps in his training, tests are sent out from the headquarters training department which definitely measure his information regarding the company's policies and procedures. These tests are not of the old-fashioned "free answer" type of questions, but of the modern "short answer" form which uses the true-false or multiple choice types of response. The short answer type of examination is now extensively used in schools and colleges because it is exact; the answer is either right or wrong and the tests are quickly scored.

5. Additional reports in memorandum or essay form are required of trainees, such as assignment consisting, for example, of a request for suggestions for increasing sales in a specified store.

6. Periodic ratings on all trainees are sent in by managers on a specific and objective service rating form supplied by the training department. The ratings are scored at headquarters and the ratings (and test scores mentioned above) entered on an individual record card for each trainee. Certified reports of work performed,

number of weeks on a given activity, number of windows trimmed, etc., are sent in by each trainee on standard forms. There are thus three definite means of checking up on a student's progress: ratings, tests, and progress reports.

A somewhat similar but less specific program has been evolved by a company operating a large number of personal loan offices throughout the country.

The training problem in an organization in which the units are not generally standardized necessitates individualized attention on the part of a training instructor or an operating executive. This is the case, for example, in an organization of junior department stores in which the departments vary considerably from store to store, and in an organization which is perhaps little more than a holding company or buying agency for a group of units operating under a common name. Even with the individualized requirements of such a situation, it is desirable to reduce to writing as much as possible of the standard practice common to all units, and to standardize routine operating procedures to some extent so that employees may not be confronted with an entirely different system in the event of transfer.

In simpler types of jobs in organizations operating on a chain basis it has been found adequate to supply each trainee with a copy of a training pamphlet and supplement this by personal inspection on the part of a travelling supervisor. One of the finest illustrations of this type of material is an illustrated handbook for the guidance of service station attendants in a large oil company.

Examinations and quizzes

Any satisfactory training program involves the employment of precise techniques for measuring the knowledge and skill acquired by trainees. Most organizations have contented themselves with a routine written or oral quiz at the end of the training period. It is quite as important, however, to check up on the progress made as training proceeds. Such a checkup can be made most effectively by using short answer test material as suggested above. Written tests, since they take less time on the part of training executives, are to be preferred to oral interviews, except for appraising a prospective manager's personality. The formalizing of examination procedure is frequently of great value in a training program because it prompts the trainees to master the subject matter and stimulates competition among them.

A WORD OF SUMMARY

The brief survey which has been made of training methods as applied to wide-spread organizations will indicate the existence of substantial interest in training procedures on the part of many firms, but may also suggest the need for specialized and technically sound methods. Earlier conceptions of training as a vague process of experimentation, of "hit-or-miss" methods or inspired "hunches," are apparently giving way slowly to the scientific method. Job analysis, systematic planning and scheduling, and greater precision in the preparation of training text material are becoming more common. Employee training in decentralized firms appears to have passed out of the fad stage and, with the added impetus of the N. R. A. codes, should find its place as one of the essential components of scientific management.

What Do You Think of the Personnel Department?

BY HAROLD V. GASKILL, *Iowa State College*

Data collected from 430 employee interviews reveal no widespread distrust of personnel departments. Confidence in the work of such departments was expressed by about three-fourths of those interviewed although personnel work and "efficiency" work were believed to be the same thing by 83 per cent of the group. Accuracy of notions regarding what a personnel department does seemed independent of actual experience with such departments.

YOU can't trust this personnel outfit. They've got those nurses snoopin' around checking up on you every time you're at home sick. Once after an Armistice Day celebration, one of the boys just wasn't up to par the next day and his wife called in to say he wouldn't be down to work. Within half an hour a nurse was calling on him to see if he really was sick, or if he had just been on a little spree. No sir, I won't co-operate with that department. We tell 'em we do, but actually we don't." Unfortunately, this is a true record of a statement made to the investigator—and still more unfortunately, this statement was made by an assistant manager of a department in a large retail store having a very efficient personnel department. Is the opinion voiced by this man typical of employees generally?

To determine the extent and degree of distrust of personnel departments, we interviewed employees of several types of organizations. Incidentally, during these interviews other informa-

tion was obtained which is presented here.

A standard interview blank was used by all interviewers, some of whom were the writer's students.¹ All interviewees, regardless of apparent qualifications, were asked to express an opinion about the value and functions of personnel departments. Loquacious individuals were given free rein. In most cases information was sought "among friends," and in that spirit given unreservedly,—the high degree of rapport between interviewer and employee contributing to the validity of the data.

The persons interviewed and organizations represented present a unique array. We selected organizations to which we had entrée. Quite naturally, such a basis of selection would not be expected to give a random, unbiased sample; hence our results cannot be

¹ The writer wishes to acknowledge the excellent work of the late Martin Meehan, a former student, who conducted many of the interviews and who aided in the compilation of data.

taken as statistically valid conclusions. The number of persons questioned in some organizations does not represent 1 per cent of the employees. In other instances, only the employees of one department were questioned, and in still others, the entire personnel, from the president and directorate down, was interviewed.

The geographical distribution of the sources of information is a good match for the heterogeneity of persons interviewed. Four towns with populations under 1,000 in Iowa, Nebraska and Missouri are represented. Several mid-western and western towns of 15,000 to 20,000 population are on the list, including Chicago, Des Moines, Omaha, Denver, and Seattle.

The number of usable interviews is 430, twenty-seven being discarded because of the person's inability to understand the questions, because he was a casual employee, and for similar reasons. These are, of course, too few expressions of opinion to warrant sweeping generalizations, but in many instances the percentage of employees questioned in each department is certainly adequate for a conclusion about that organization at least. For the general trends, all of the interviews are considered together, regardless of organization or locality, as our interest was primarily in the employee's estimate of personnel work.

RESULTS

First we tabulated information about the interviewees, in order to get a picture of the character of the group. Sixty-four per cent were over 35 years of age. A great variety of occupations was represented. These may

be classified as follows: skilled workers, 30 per cent; salesmen, 30 per cent; clerical, 21 per cent; managers and supervisors, 11 per cent; miscellaneous, 8 per cent. Slightly more than half of the workers were employed by concerns which had no personnel department.

These men expressed their opinions concerning personnel departments by answering a variety of questions. Answers to these questions can be presented most concisely in a *yes-no* tabular form (table 1).

All of the above questions, except the last, are adequately answered by 'yes' or 'no.' Some other types of questions appeared at random among the "*yes-no*" questions. This intermixing served two purposes: (1) to relieve the rather mechanical situation arising from questions answerable by a single word, and (2) to give the persons being interviewed an opportunity to go more into detail if they desired. Of these other types of questions, some were inserted purely as "shock absorber" items, to improve the rapport between interviewer and employee.

Among these non-specific questions were: Do you know any men connected with a personnel department? Are these men leaders or are they drivers? Do you think personnel work will continue to grow? Do you think men are better fitted to a job in an industry where there is a personnel department? Do you think that some personnel departments do not do personnel work? Do you think that industry, as a whole, has personnel departments just for advertising purposes? Are personnel departments of any value? Do most department

stores in your community have personnel departments? In stores where there is a personnel department, do most of the clerks seem pleasant? Efficient? Although many of these

of a personnel department? This was designed to get the individual to tell just what he thought the work of a personnel department comprised. The trend of answers to this question

TABLE 1

QUESTION	PER CENT ANSWERING								
	Yes	No							
Do you believe personnel departments do only the hiring and discharging of employees?.....	48	52							
Do you think these departments help promotion?.....	74	26							
Do you think these departments hinder promotion?.....	11	89							
Do you believe personnel departments do have or should have contact with an employee in all his work?.....	47	53							
Do personnel departments fit a man "to" his job?.....	31	69							
Do most industries in your community have personnel departments?..	44	56							
Is there a general feeling of satisfaction on the part of the employees in organizations in which there is a personnel department?.....	38	12							
	(50 no answer)								
Do you believe personnel departments reduce labor turnover?.....	72	28							
Do you think mental tests are of any value in industry?.....	86	14							
Is it hard to become acquainted with a personnel interviewer?.....	6	45							
	(49 no answer)								
Do you think personnel departments are necessary for personal contact between the management and the employees?.....	69	17							
	(14 indifferent)								
Do you have any confidence in personnel departments?.....	74	9							
	(17 "can't say")								
Are personnel departments good 'advertising' for the company?.....	71	29							
Do you believe personnel work and 'efficiency' work to be closely related?.....	83	14							
	(3 no answer)								
How many employees (<i>minimum number</i>) do you think an individual plant, store, factory, business house, etc. should have to warrant a personnel department?									
	Few	25	50	100	150	200	250	400	No answer
Per cent.....	2	11	12	24	9	4	2	2	32

could have been answered by 'yes' or 'no', the employee was urged to elaborate.

Some of the questions not answerable by one word are genuinely significant. One is: What is your notion

indicates that there is no significant difference in accuracy between the notions expressed by workers in an organization which *has* a personnel department and those who work in plants which do *not* have such depart-

ments. Apparently the presence of a personnel department is no assurance that employees in general will have exact or reasonably clear notions regarding its functions.

As the reader has undoubtedly observed, some of the questions are designed, in part, to check information given earlier. Thus, discrepancies and insincere information might be brought to light, while an opportunity is offered for further enlarging upon points made earlier. For example, fifty-seven men worked where there was no personnel department, where most industries in their community did not have such departments, had never visited a plant in which there existed such a department and knew no one connected with a personnel department; yet eleven had very elaborate notions of the functions of personnel departments. Strangely, six of these eleven descriptions were most intelligent and accurate in many details. The probable explanation is reading. One answer indicates very specific and well selected reading. I quote that answer to illustrate, (Of what benefit do you believe personnel work to be?) *Ans:* "Greater efficiency through the individual's being placed in the line he is adapted to and a better morale in the entire force of employees." Not all of these eleven answers, however, are

so accurate. Another, from among the 57 under discussion, at the other extreme (same question as above) follows. *Ans:* "Not a darned bit. We have so many things to donate money to now that pretty soon all I'll get on pay day will be the empty envelope. Too many do-dads anyhow. That's what's wrong with us today. If it ain't Safety First its Red Cross. And now its 'persynell.' We don't need none of 'em, and I won't spend a cent for 'em."

SUMMARY

The attitude of distrust, as expressed by an employee in a casual interview was not typical of opinions of those interviewed later. The number of accurate notions regarding personnel work is surprisingly high—occurring about as frequently in organizations having a personnel department as in organizations which have no such departments. Confidence in the work of personnel departments was expressed by about three-fourths of the persons interviewed. Nine per cent, quite definitely, had no confidence. Personnel work and "efficiency" work are believed to be the same thing by eighty-three per cent of the interviewees. Bad effects of personnel departments, as judged by employees, are totally insignificant.

Vocational Satisfaction of Stanford Graduates

By C. GILBERT WRENN, *Stanford University*

The desirability of judicious and informed occupational planning by college students is emphasized afresh by Dr. Wrenn's analysis.

Of 2,424 Stanford University alumni selected as a sampling of the total thirteen-odd thousand, 19 per cent would not re-select their present vocation. This representation of vocational dissatisfaction spreads over 71 of the 91 vocational fields in which members of the total group engage. The data indicate that the professions suffer fully as heavily as do the business occupations. Vocational satisfaction is found to be more closely related to the consistency of the vocational choice made in college than to the occupation chosen.

WOULD you re-select your present vocation?" Nineteen per cent of the Stanford University alumni say "No!"

The responses of 2,424 Stanford graduates¹ were studied in securing this statement of vocational dissatisfaction. A wide spread of vocations is found among the dissatisfied alumni, the 460 who wish they had not chosen their present vocation representing 71 of the 91 vocational fields in which the total group engages. Does this spread of

dissatisfaction over such a wide range of vocations indicate that the individual is the deciding factor rather than the inherent disadvantages of any given vocation? This question should be held in mind while considering the data of succeeding paragraphs, data that emphasize the relative amount of dissatisfaction in specific vocations.

Table 1 lists the vocations represented by the dissatisfied alumni *for all vocations in which ten or more alumni engage*. The vocations are listed in order of the proportion of those dissatisfied to the total number answering. The data are given for the total of 3,021 men who were studied, those omitting an answer to this question being tabulated in a separate column.

Of the 460 dissatisfied alumni, 239 or 52 per cent are in the professions or other vocations demanding some focussing of college training. Table 1 includes twenty-one vocations in which

¹ A total of 4,230 graduates (3,021 men and 1,209 women) were selected for study as a sampling of the thirteen-odd thousand Stanford alumni, most of whom had responded to an alumni survey. The 2,424 men who responded to this particular question among others are the subjects of this brief report. Twenty-one basic tables of data are to be found in the *Stanford University Alumni Directory, 1891-1931*, Stanford University Press, 1931, pp. 1027-1034 (available also as a reprint).

TABLE 1

Vocations Represented by Ten or More Stanford Alumni, Ranked in Order of Proportion Dissatisfied

VOCATION	NUMBER ANSWERING "YES" TO QUESTION "WOULD YOU RE-SELECT YOUR PRESENT VOCATION?"	NUMBER ANSWERING "NO" TO QUESTION "WOULD YOU RE-SELECT YOUR PRESENT VOCATION?"	ANSWER OMITTED	TOTAL	PER CENT DISSATIS- FIED AMONG THOSE ANSWERING QUESTION
Office worker.....	13	14	4	31	51.8
Public service, politician.....	6	6	3	15	50.0
Accountant, C.P.A.....	20	12	5	37	37.5
Specialty salesman.....	9	5	0	14	35.7
Petroleum engineer.....	10	5	2	17	33.3
Scientific Research.....	7	3	4	14	33.3
Agriculturalist.....	36	17	18	71	32.1
Salesman (misc.).....	32	14	5	51	30.4
"Business".....	60	24	15	99	28.6
Manufacturer.....	10	4	4	18	28.6
Banker, bankworker.....	53	20	7	80	27.4
Journalist.....	34	12	3	49	26.1
Mining engineer.....	32	11	8	51	25.6
Business manager.....	76	25	13	114	24.7
Office manager.....	29	9	5	43	23.7
"Engineer".....	42	13	9	64	23.6
Geologist.....	66	19	4	89	22.3
Civil engineer.....	84	24	13	121	22.2
Mathematician.....	8	2	0	10	20.0
Secretarial worker.....	8	2	3	13	20.0
Chemist, chem. engineer.....	80	20	8	108	20.0
Teacher, below college.....	89	22	10	121	19.8
Mechanical engineer.....	81	20	7	108	19.8
Owner of business (misc.).....	17	4	4	25	19.0
"Foreign trade".....	9	2	2	13	18.2
Insurance broker, salesman.....	59	12	5	76	16.9
Electrical engineer.....	70	13	7	90	15.6
College or univ. teacher.....	102	17	17	136	14.3
Stock or bond broker.....	18	3	2	23	14.3
Realtor and R.E. salesman.....	32	5	8	45	13.5
Sales manager.....	27	4	0	31	12.9
Biologist.....	21	3	3	27	12.5
Minister.....	14	2	1	17	12.5
Army officer.....	9	1	1	11	10.0
Advertising worker.....	27	3	6	36	10.0
School administrator.....	50	5	6	61	9.1
Physician, surgeon.....	159	12	23	194	7.0
Lawyer.....	283	15	34	332	5.0
Total for these vocations.....	1,782	404	269	2,455	
Student.....	62	9	128	199	
Total for vocations represented by fewer than 10 alumni.....	120	47	200	367	
Grand Total.....	1,964	460	597	3,021	19.0

20 per cent or more of the alumni are dissatisfied. Of these nine are in the so-called professional class. It is a serious matter that proportionately so many alumni were allowed to take training in college for vocations which have aroused such an expression of dissatisfaction.

This study throws no light on the possible causes of this dissatisfaction, whether lack of ability, lack of fundamental interest, or personal maladjustment to the vocational environment. In any event more adequate self-analysis during the college period might have rendered dissatisfaction less prevalent. Temporary disappointment, overweening ambition and rationalization of an inferior level of achievement will always result in a certain amount of vocational grumbling. This is not to be taken too seriously; but the absolute rejection of the wisdom of an earlier choice is doubtless a graver matter and is indicative of actual vocational maladjustment.

It is interesting to note that business and the professions are about equally represented at both the top and the bottom of Table 1 (vocations containing both a large proportion and a small proportion of dissatisfied alumni). As many mining or civil engineers are dissatisfied as "business managers" or "office managers." Among those fairly high in satisfaction, "sales managers" and "advertising workers" rank along with biologists and ministers. However, the two vocations standing highest in vocational satisfaction, medicine and law, have the longest professional training. The amount of "weeding out" that takes place in the strenuous training for these professions evidently leaves a residue of individ-

uals well adapted to the requirements of the vocation. Does this contain a clue for a college vocational guidance program involving other vocations?

A total of 82 per cent of the alumni are in the same vocation as that chosen in college or in one similar to it. This was ascertained by comparing answers to the two questions, "What is your present vocation?" and "What vocation did you choose in college?" After proper discount is made for unreliability, there is still significance in the fact that over four-fifths are in the vocation chosen in college. Considerable permanence value may be attached to the vocational decision made in college. Were these choices happy ones? Another comparison throws some light on this question.

A total of 84 per cent of those *in the same vocation as that chosen in college* expressed vocational satisfaction as against only 65 per cent of those *not in the same vocation as that chosen in college*. Expressed conversely, *there is twice as much vocational dissatisfaction among those who did not follow out their college decision as among those who are in the vocation decided upon when they were in college.*

A general conclusion to be drawn from this study is paradoxical. Vocations for which college gives training, the professions, rank high in proportion of those dissatisfied, and yet vocational choices made in college are fairly reliable and fairly valid. The training course itself, unless quite rigid as in medicine and law, does not weed out enough of those who later become vocationally maladjusted. The student may undergo training for a profession and yet lack the fundamental interests and personal qualities essen-

tial for vocational happiness. A further factor may consist of the nature of such professional training. In this connection Professor E. K. Strong has pointed out to the writer that training for medicine and law includes more elements analogous to later professional practice than does the training course for many other professions. More actual "job-elements" are provided, the medical student working with his anatomy and clinics, the law student with his cases. Such training programs act as important selection agencies in eliminating those whose performance or attitude does not indicate later vocational adjustment.

A college guidance program should include at least two much-needed points of emphasis: provision for all possible assistance to the student in the analysis and evaluation of his interests and traits, and the provision of "job in miniature," apprenticeship or other valid vocational experiences in the pre-professional training program. To provide the foundation of a *rounded* student personnel program there must be added to these points of emphasis, assistance in the establishment of efficient methods of study and working habits, and assistance in the development of an integrated and socially adjusted personality.

Unemployment In Buffalo And Lincoln 1932-1933

BY CLEON O. SWAYZEE, *University of Nebraska*, AND FREDERICK E. CROXTON,
Columbia University

Local data on unemployment, such as those here reported, should be gathered and analyzed in many centers, pending the time when the United States Department of Labor is in position to furnish detailed facts about unemployment currently.

IT IS no longer necessary to plead the value of accurate unemployment data. Relief agencies must have adequate information in regard to the nature and character of their problem, and bases are needed upon which to build a program of unemployment insurance. For the first of these uses the data must be promptly available, and while they are less urgently needed for the second use, they are none the less essential. Unfortunately, with few exceptions,¹ little attempt has been made to gather comprehensive and comparable data.

The material presented in these

¹ See *Unemployment in Columbus, Ohio, 1921 to 1925*, by Frederick E. Croxton, Bulletin 409, U. S. Bureau of Labor Statistics; *Unemployment in Buffalo, November, 1932*, by Frederick E. Croxton, Special Bulletin 179, Div. of Statistics and Information, N. Y. State Dept. of Labor; *Unemployment in Syracuse, November 1931*, by John N. Webb, Special Bulletin 173, Div. of Statistics and Information, N. Y. Dept. of Labor; *Unemployment in Lincoln, Neb., November 1932* and *Unemployment in Lincoln, Neb., November 1933*, by Cleon O. Swayzee, Univ. of Nebraska Studies in Business, No's. 33 and 34.

pages represents the results of unemployment surveys made in November, 1933, in two cities far apart geographically and greatly dissimilar in industrial composition. Buffalo, with almost 600,000 population, represents a highly industrialized center with much heavy manufacturing. Lincoln, a mid-western city of about 80,000 population, is located in an agricultural community and has little manufacturing. Accompanying the 1933 figures are presented comparable data for studies made in the same cities during November 1932.²

In both cities the same methods were used and the data were collected at very nearly the same time. In neither Lincoln nor Buffalo was it possible to include the entire population in the studies; consequently, a limited number of areas were chosen for study in each city—great care being taken to secure good samples, both as to industry and nativity distribution. The

² For further 1932 results, see Croxton and Swayzee, *Measuring Unemployment in Buffalo and Lincoln*, *Personnel Journal*, vol. 12, June, 1933, pp. 23-32.

enumeration was done by carefully instructed and supervised college students and information was secured for all males 18 years of age or over (except students) and all females 18 or over who were usually employed in some gainful occupation. Questions on the schedule called for information concerning relation to head of household, sex, age, nativity, present or last regular employer, employment status, ability and willingness to work. Names were not asked.

The enumeration revealed some striking contrasts in industrial make-up. In Buffalo 42.7 per cent of the persons enumerated were engaged in manufacturing and mechanical pursuits, while in Lincoln only 16.9 per cent were so engaged. In the manufacture of iron, steel, and their products, Buffalo showed 9.4 per cent and Lincoln 0.6 of one per cent of those enumerated. Automobiles, parts and tires accounted for 5.4 per cent of those enumerated in Buffalo, and only 1.5 per cent in Lincoln. On the other hand, the trade and transportation pursuits predominated in Lincoln, including 39.9 per cent of those enumerated, as against 27.5 per cent in Buffalo. Almost 20 per cent of those enumerated in Lincoln were engaged in retail and wholesale trade; in Buffalo only 11.4 per cent. Lincoln also showed larger proportions in domestic and personal service and professional service than did Buffalo.

There were, however, some similarities. In the railway, express, bus, gas and light classification, in the government employee group, and in paper, printing and publishing, the proportions were very much the same

in both cities. Except for changes in the proportions engaged in the building trades there was no appreciable shift in industrial distribution from 1932 to 1933.

EMPLOYMENT STATUS

The employment status of all persons able and willing to work in both 1932 and 1933 is given in table 1. This and all other tables exclude persons enumerated who were either unable or unwilling to work.³ Table 1 indicates that unemployment was much more severe for both men and women in both years in Buffalo than in Lincoln. Unemployment for Buffalo males showed a decrease from 1932 to 1933, but for females in Buffalo and for both males and females in Lincoln a slight increase in unemployment is shown. Part time employment was also greater in Buffalo than in Lincoln. However, Buffalo showed a substantially greater decrease in this classification during the year than did Lincoln. Full time employment was considerably more each year in Lincoln than in Buffalo, but there was almost no change in full time employment in Lincoln during the year. Buffalo, on the other hand, showed a marked gain in full time employment, increasing from 463 per thousand for both sexes in 1932 to 582 per thousand in 1933. This difference, however, is not surprising. Recovery, like depression, comes more rapidly to industrial than to agricultural communities.

³ In 1933 this group constituted 6.3 per cent of the males enumerated in Lincoln and 4.4 per cent of the males enumerated in Buffalo.

TABLE 1

Employment status of all persons, able and willing to work, Buffalo and Lincoln, 1932 and 1933

EMPLOYMENT STATUS	BUFFALO				LINCOLN			
	1933		1932		1933		1932	
	Num- ber	Per cent	Num- ber	Per cent	Num- ber	Per cent	Num- ber	Per cent
Males								
Employed:								
Full time.....	7,125	57.4	5,262	44.0	1,699	66.9	1,800	66.5
Part time.....	1,729	13.9	2,795	23.4	291	11.5	343	12.7
$\frac{2}{3}$ but less than full.....	503	4.0	846	7.1	52	2.0	68	2.5
$\frac{1}{2}$ but less than $\frac{2}{3}$	692	5.6	1,090	9.1	130	5.1	171	6.3
$\frac{1}{3}$ but less than $\frac{1}{2}$	319	2.6	464	3.9	39	1.5	35	1.3
Less than $\frac{1}{3}$	212	1.7	394	3.3	48	1.9	44	1.6
Fraction not reported.....	3	*	1	*	22	0.9	25	0.9
Unemployed.....	3,564	28.7	3,903	32.6	550	21.7	563	20.8
Total, males.....	12,418	100.0	11,960	100.0	2,540	100.0	2,706	100.0
Females								
Employed:								
Full time.....	2,032	61.4	1,639	55.6	659	70.0	666	68.5
Part time.....	415	12.5	560	19.0	107	11.4	148	15.2
$\frac{2}{3}$ but less than full.....	87	2.6	141	4.8	12	1.3	23	2.4
$\frac{1}{2}$ but less than $\frac{2}{3}$	163	4.9	235	8.0	41	4.4	58	6.0
$\frac{1}{3}$ but less than $\frac{1}{2}$	69	2.1	96	3.2	21	2.2	22	2.3
Less than $\frac{1}{3}$	94	2.8	88	3.0	19	2.0	32	3.3
Fraction not reported.....	2	0.1	—	—	14	1.5	13	1.3
Unemployed.....	864	26.1	750	25.4	175	18.6	158	16.3
Total, females.....	3,311	100.0	2,949	100.0	941	100.0	972	100.0
Both sexes								
Employed:								
Full time.....	9,157	58.2	6,901	46.3	2,358	67.7	2,466	67.0
Part time.....	2,144	13.6	3,355	22.5	398	11.4	491	13.3
$\frac{2}{3}$ but less than full.....	590	3.8	987	6.6	64	1.8	91	2.5
$\frac{1}{2}$ but less than $\frac{2}{3}$	855	5.4	1,325	8.9	171	4.9	229	6.2
$\frac{1}{3}$ but less than $\frac{1}{2}$	388	2.5	560	3.8	60	1.7	57	1.5
Less than $\frac{1}{3}$	306	1.9	482	3.2	67	1.9	76	2.1
Fraction not reported.....	5	*	1	*	36	1.0	38	1.0
Unemployed.....	4,428	28.2	4,653	31.2	725	20.8	721	19.6
Total, both sexes.....	15,729	100.0	14,909	100.0	3,481	100.0	3,678	100.0

* Less than one-tenth of one per cent.

NATIVITY AND EMPLOYMENT STATUS

Table 2 presents data on the employment status of males by nativity

the native colored. Foreign born and native white followed in the order named. In Lincoln, full time employment for native white males was virtu-

TABLE 2
*Employment status of all males, able and willing to work, by nativity groups, Buffalo and Lincoln, 1932 and 1933**

NATIVITY AND EMPLOYMENT STATUS	BUFFALO				LINCOLN			
	1933		1932		1933		1932	
	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent
Native white								
Employed:								
Full time.....	5,708	59.6	4,242	46.5	1,450	69.7	1,572	69.6
Part time.....	1,223	12.8	2,022	22.1	216	10.4	262	11.6
Unemployed.....	2,648	27.6	2,864	31.4	414	19.9	426	18.8
Total.....	9,579	100.0	9,128	100.0	2,080	100.0	2,260	100.0
Native colored								
Employed:								
Full time.....	76	40.2	50	23.8	14	†	21	†
Part time.....	36	19.0	60	28.6	1	†	1	†
Unemployed.....	77	40.8	100	47.6	21	†	18	†
Total.....	189	100.0	210	100.0	46	†	40	†
Foreign born								
Employed:								
Full time.....	1,341	50.6	970	37.0	221	54.6	187	49.9
Part time.....	470	17.7	713	27.2	72	17.8	75	20.0
Unemployed.....	839	31.7	938	35.8	112	27.7	113	30.1
Total.....	2,650	100.0	2,621	100.0	405	100.0	375	100.0

* Does not include 1 male in Buffalo in 1932, 31 males in Lincoln in 1932, and 19 males in Lincoln in 1933 not reporting as to nativity.
† Percentages not computed because of small numbers involved.

groups. While the number of native colored in Lincoln is too small to be meaningful, the table shows unemployment to be most severe in both Buffalo and Lincoln in 1932 and in 1933 for

ally unchanged during the year, but it increased for the foreign born from 499 per thousand in 1932 to 546 per thousand in 1933. In Buffalo, substantial increases in full time employment were

TABLE 3

*Employment status of males, able and willing to work, by age groups, Buffalo and Lincoln, 1933**

AGE	BUFFALO				LINCOLN			
	Em- ployed full time	Em- ployed part time	Unem- ployed	Total	Em- ployed full time	Em- ployed part time	Unem- ployed	Total
Number								
Under 20 years.....	135	28	240	403	179	36	134	349
20 and under 25.....	672	197	614	1,483				
25 and under 30.....	805	183	391	1,379	201	32	45	278
30 and under 35.....	933	194	294	1,421	221	28	39	288
35 and under 40.....	1,067	250	383	1,700	208	28	45	281
40 and under 45.....	1,044	274	383	1,701	230	26	46	302
45 and under 50.....	850	219	323	1,392	191	44	46	281
50 and under 55.....	714	163	308	1,185	198	40	55	293
55 and under 60.....	406	109	205	720	103	23	42	168
60 and under 65.....	269	66	194	529	84	11	42	137
65 and under 70.....	164	28	130	322	68	21	55	144
70 and over.....	66	18	99	183				
Total.....	7,125	1,729	3,564	12,418	1,683	289	549	2,521
Per cent								
Under 20 years.....	33.5	6.9	59.6	100.0	51.3	10.3	38.4	100.0
20 and under 25.....	45.3	13.3	41.4	100.0				
25 and under 30.....	58.4	13.3	28.3	100.0	72.4	11.4	16.2	100.0
30 and under 35.....	65.7	13.6	20.7	100.0	76.7	9.7	13.6	100.0
35 and under 40.....	62.8	14.7	22.5	100.0	74.0	10.0	16.0	100.0
40 and under 45.....	61.4	16.1	22.5	100.0	76.2	8.6	15.2	100.0
45 and under 50.....	61.1	15.7	23.2	100.0	68.0	15.6	16.4	100.0
50 and under 55.....	60.3	13.8	25.9	100.0	67.5	13.7	18.8	100.0
55 and under 60.....	56.4	15.1	28.5	100.0	61.3	13.7	25.0	100.0
60 and under 65.....	50.9	12.4	36.7	100.0	61.3	8.0	30.7	100.0
65 and under 70.....	50.9	8.7	40.4	100.0	47.3	14.6	38.1	100.0
70 and over.....	36.1	9.8	54.1	100.0				
Total.....	57.4	13.9	28.7	100.0	66.8	11.4	21.8	100.0

* Does not include 19 males in Lincoln not reporting as to age.

shown in all three nativity groups, the increase being greatest for the native colored.

AGE AND EMPLOYMENT STATUS

In table 3 are shown data on the employment status of males of the

different age groups for 1933. It will be observed that the results of both Buffalo and Lincoln were very much the same, greatest unemployment being found in the extreme age groups. For Buffalo the figures reveal that the percentage unemployed was least

among males 30 to 35 years of age, and only slightly higher for those 35 to 50. In 1932, least unemployment was found among males 35 to 40 years of age. So slight was the change, however, that it is probably of no significance. Greatest part time employment was found in the 40 to 45 age group, but except for the very old and very young, for which groups part time employment was least, there was little difference among the different age groups. Greatest full time employment was enjoyed by Buffalo males 30 to 35 years of age, but the difference between this group and those between 35 and 55 was not great. Full time employment was least among the very young and very old.

Data for Lincoln show only slight variations from the Buffalo experience. Least unemployment was found for males 30 to 35, but not much less than for those from 25 to 30 and 35 to 50. Greatest part time employment fell in the 45 to 50 age group. Full time employment was enjoyed by about the same proportion of men within the range of 25 to 55 years. The 1933 figures do not differ materially from those of 1932.

INDUSTRY AND EMPLOYMENT STATUS

The employment status of males in the major industry groups in 1933 is given in table 4. While too few persons were enumerated in some industry groups in Lincoln to make comparisons meaningful, striking similarities may be seen. In both Buffalo and Lincoln, greatest full time employment and least unemployment was found among those engaged in profes-

sional service. With the exception of the miscellaneous group, for which there were no comparable Lincoln figures, least full time employment and greatest unemployment, as well as greatest part time employment, was found in the manufacturing and mechanical pursuits. While some of the differences are not great, every major industrial group showed greater unemployment and less full time employment in Buffalo than in Lincoln. This was true also of the 1932 figures.

Comparisons of the 1932 figures with those for 1933 for the different industry groups reveal some interesting points. Substantial gains in full time employment were made in Buffalo for those engaged in manufacturing and mechanical pursuits, the increase being from 285 per thousand in 1932 to 488 per thousand in 1933. Marked decreases appeared in part time employment and unemployment for the same group. An increase in full time employment from 591 per thousand in 1932 to 699 per thousand in 1933 was enjoyed by Buffalo government employees. In the same classification unemployment decreased from 231 per thousand to 162 per thousand. Unemployment remained about the same for those engaged in trade and transportation, but there were fewer part time employees and more full time employees in 1933 than in 1932. In the remaining Buffalo groups slight, but not significant improvements were shown.

In only one group were significant changes noted in Lincoln. Full time employment increased from 617 per thousand in 1932 to 730 per thousand

TABLE 4

*Employment status of males, able and willing to work, by industry group, Buffalo and Lincoln, 1933**

INDUSTRY GROUP	BUFFALO				LINCOLN			
	Employed full time	Employed part time	Unemployed	Total	Employed full time	Employed part time	Unemployed	Total
Number								
Professional service.....	171	12	20	203	143	4	8	155
Clerical (not otherwise specified).....	—	—	45	45	7	—	2	9
Domestic and personal service.....	384	64	162	610	116	14	29	159
Government employees (other than teachers).....	851	169	198	1,218	198	21	27	246
Trade and transportation.....	2,146	418	728	3,292	823	148	133	1,104
Manufacturing and mechanical pursuits..	2,871	1,003	2,010	5,884	271	85	179	535
Labor (not otherwise specified).....	1	—	30	31	3	7	35	45
Self-employed.....	683	60	146	889	120	3	16	139
Miscellaneous.....	18	3	224	245	14	8	63	85
Total.....	7,125	1,729	3,563	12,417	1,695	290	492	2,477
Per cent								
Professional service.....	84.2	5.9	9.9	100.0	92.3	2.6	5.2	100.0
Clerical (not otherwise specified).....	†	†	†	†	†	†	†	†
Domestic and personal service.....	63.0	10.5	26.5	100.0	73.0	8.8	18.2	100.0
Government employees (other than teachers).....	69.9	13.9	16.2	100.0	80.5	8.5	11.0	100.0
Trade and transportation.....	65.2	12.7	22.1	100.0	74.5	13.4	12.0	100.0
Manufacturing and mechanical pursuits..	48.8	17.0	34.2	100.0	50.7	15.9	33.5	100.0
Labor (not otherwise specified).....	†	†	†	†	†	†	†	†
Self-employed.....	76.8	6.8	16.4	100.0	86.3	2.2	11.5	100.0
Miscellaneous.....	7.4	1.2	91.4	100.0	†	†	†	†
Total.....	57.4	13.9	28.7	100.0	68.4	11.7	19.9	100.0

* Does not include 1 male in Buffalo and 63 males in Lincoln not reporting as to industry.

† Percentages not computed because of small numbers involved.

in 1933 for those engaged in domestic and personal service. In all other groups marked stability was shown.

DURATION OF UNEMPLOYMENT

Table 5 presents data on the duration of unemployment for males able

and willing to work. In both Buffalo and Lincoln, over three fifths of the unemployed had been idle more than one year in November 1933. In Buffalo over half had been idle for more than two years. Slightly over 45 per cent had been idle for more than two

years in Lincoln. In both cities unemployment of two years duration increased greatly from 1932 to 1933, but in most of the other classifications decreases were noted.

One rather striking difference between the two cities should be noted. In Lincoln a substantial decrease in *new* unemployment (i.e., unemployment of less than 10 weeks duration)

CONCLUSION

Unemployment and under-employment were greater in Buffalo than in Lincoln in both 1932 and 1933, due, for the most part, to the differing industrial character of the two cities. Between 1932 and 1933 unemployment decreased in Buffalo, but increased very slightly (not significantly) in Lin-

TABLE 5

*Duration of unemployment of males, able and willing to work, Buffalo and Lincoln, 1932 and 1933**

DURATION OF UNEMPLOYMENT	BUFFALO				LINCOLN			
	1933		1932		1933		1932	
	Num- ber	Per cent	Num- ber	Per cent	Num- ber	Per cent	Num- ber	Per cent
Less than 10 weeks.....	639	18.0	404	10.4	57	10.9	134	26.3
10 and under 20 weeks.....	204	5.7	305	7.8	39	7.4	49	9.6
20 and under 30 weeks.....	156	4.4	419	10.8	35	6.7	61	12.0
30 and under 40 weeks.....	81	2.3	230	5.9	19	3.6	24	4.7
40 and under 52 weeks.....	52	1.4	199	5.1	38	7.2	16	3.1
52 and under 104 weeks.....	504	14.1	918	23.5	99	18.9	123	24.1
104 weeks and over.....	1,928	54.1	1,425	36.5	238	45.3	103	20.2
Total.....	3,564	100.0	3,900	100.0	525	100.0	510	100.0

* Does not include 3 males in Buffalo in 1932, 53 males in Lincoln in 1932, and 14 males in Lincoln in 1933 not reporting as to duration of unemployment.

took place between 1932 and 1933. In Buffalo, however, there was a marked increase in new unemployment—from 104 per thousand in 1932 to 180 per thousand in 1933. This reflected a slight decline in employment in October and November 1933, which is shown by the Buffalo factory employment data of the New York State Department of Labor.

coln. In both cities unemployment was greater for native colored and for foreign born than for native whites. Unemployment was most severe among men under 25 and 60 years of age or over. No significant change was noted in this respect during the year. Employment conditions were better in each of the major industry groups in Lincoln than in Buffalo, but in Buffalo

considerably greater improvement was shown from 1932 to 1933. Almost no change was noted in the Lincoln industry groups. Unemployment had been of longer duration in Buffalo than in Lincoln, but unemployment of long standing increased more in Lincoln than in Buffalo from 1932 to 1933. There was considerably more *new* unemployment in Buffalo than in Lincoln.

It should be noted that government

made work was under way in both cities when the 1933 study was made, but that C. W. A. employment did not actively begin until two or three weeks after the time of enumeration.

Until the Federal government or the States maintain current figures on unemployment it is to be hoped that an increasing number of comparable local studies will be made to furnish a sorely needed body of accurate and comprehensive unemployment data.

The Effect of Color on Workmen

BY DAVID H. PIERCE AND JAMES D. WEINLAND, *New York University*
Experiments with white and colored lights in a work-room do not confirm traditional notions about the effects of red and yellow, green and blue.

The experiment described here was undertaken to examine the effect of color upon men working at the Bogardus factory test machine. Various colored lights were used, one by one, in a room painted white. The men were paid wages and employed for regular working days. Output was measured and introspective reports of bodily feeling were taken every fifteen minutes. The findings favored white and indicated that nervous excitation resulted when the colors deviated from white. Introspective feeling reactions were marked but not consistent. Green for instance did not appear to be characteristically stimulating nor blue soothing. There was no evidence supporting the view that red is warm and green is cool. The results indicate that feeling responses to color, are due to association of color with objects rather than to any inherent feeling response to color itself.

THE object of these experiments was to ascertain the effect of lighting of various colors upon workmen's output and feelings. It has often been said, even by authorities, that red is exciting, blue quieting, green cooling, etc. We planned a controlled experiment to examine this matter.

Experimental room. A small room where factory conditions could be simulated, and the lighting controlled, was used for the investigation. The window was covered to shut out daylight, and the walls and ceiling were painted a flat white, to give full reflection to the various colors. Red, green, blue, yellow, orange-amber, and yellow-amber lamps were used, producing an effect approximately the same as if white lights had been used continually

in a room painted first red, then green, then yellow, etc.

Apparatus. The work consisted in operating a Bogardus factory test machine. This equipment has a motor driven rotating arm which, in turning, pushes a block off the table so that it falls into a receiving pan below. The workman's job consists in picking up the blocks and putting them back on the table, one by one, where the rotating arm can strike them. A mechanical recorder counts one each time a block is knocked off. The operation may continue any number of hours and resembles a routine factory job. The table, blocks and machine were painted a flat black to absorb all wave lengths of light. After some preliminary experiments a thermometer was installed, so that the temperature could

be recorded. The amount of light used was measured in "foot-candles" by a Weston foot-candle-meter.

Procedure. A foreman was in charge of the work and two men, a recorder and operator, always worked together. The amount of light for each experiment was regulated at approximately 2.5 foot-candles of a given color, and no other light was permitted to enter the room. The operator, after starting the motor, sat down at the table and went to work. His task of picking up the blocks one by one and placing them in position on the table where they would be knocked off by the revolving arm and counted was rendered more exacting by the fact that each block must be placed on exactly the right spot in order for the counter to work. Consequently, close attention was required and the job was difficult enough to induce fatigue. A half dozen blocks were used, so that there was always one waiting in the receiving pan. By rotating the mechanical arm at a constant speed, variations in work output were made to depend upon the operator's failure to keep up with the machine as fatigue, monotony or dizziness, affected him.

A single work period lasted for fifteen minutes, after which the machine was stopped and the counter figures and room temperature were recorded. Both operator and recorder indicated by checking on a mimeographed sheet how they felt. Then, after a ten-minute interval, the work was resumed. The two men remained in the room, subject to the colored light, during the whole morning or afternoon period, even though the work was not continuous. For each new man the

various colors were presented in a different order.

The experiment lasted for thirty days and represented 186 working hours. The working day was approximately from nine o'clock to five, with an hour for lunch; though care of the apparatus reduced the time actually spent in working periods. A licensed engineer acted as foreman for nearly all the experiments and took charge of the records. The workmen were provided through the courtesy of the Gibson Committee of New York City, by whom they were paid.

THE RESULTS

Output. Table 1 gives for each color separately: (1) duration of the experiment in hours and minutes; (2) total output in number of blocks; and (3) average number of blocks per minute. It will be observed that output averages highest under white light. Yellow follows with its record slightly lowered by the woman worker who perhaps should not have been compared with men on this task. As the light deviated from white, output fell off. We shall find in the feeling reactions some suggestions as to why output did fall off under the colored lights.

Feeling reactions. The term feeling is used here in the popular, rather than the technical sense. Various feeling reactions such as "monotony," "impatience," "feeling good," etc. were listed on mimeographed sheets on which men checked their state of feeling at the end of each fifteen minute experiment. A choice between "some" or "much," was given for each reaction. The number of feeling

reactions to the various colors is given in table 2.

having stimulated more feeling responses than the other colors.

It should be noted that when the workmen checked their feeling reac-

The workmen felt the effects of colored lights and had no difficulty in

TABLE 1
Effects of various colors on output

COLOR	TOTAL DURA- TION OF EXPERIMENTS		TOTAL OUTPUT OF BLOCKS	AVERAGE NUMBER OF BLOCKS PER MINUTE	REMARKS
	hours	minutes			
Blue.....	45	36	33797	12.35	Includes one workwoman Three workmen One workman
Green.....	32	05	28081	14.58	
White.....	34	05	32582	15.93	
Red.....	24	51	17924	12.02	
Yellow.....	23	50	21101	14.75	
Orange-amber.....	21	40	15588	11.99	
Yellow-amber.....	4	45	2474	8.67	
Total.....	186	52	151547	12.90	

TABLE 2
Feeling reactions

"SOME" REACTIONS		QUALITY OF RESPONSE	"MUCH" REACTIONS	
Number of responses divided by time	Color		Color	Number of responses divided by time
1.17	Orange amber	Feel very good		
1.58	Green	Feel good		
1.19	Yellow	Feel average		
.21	Green	Feel below par		
1.25	Red	Dullness	Green	.43
.71	Orange amber	Monotony	Green	.59
1.25	Red	Fatigue	Red	.78
.89	Yellow	Headache	Red	.27
.75	Blue	Impatience	Green	.40
.15	Red	Excited	White	.05
.98	Red	Nervousness	Red	.07
1.25	Yellow	Dizziness	White	.17
.52	Green	Grogginess	Yellow	.29
.58	Red	Sick stomach	Red	.07

tions they marked one or several "feelings" as they chose. In consequence the colors are not equally represented, red, green, and yellow

recording their feelings. Still, these feeling reactions were inconsistent and showed no evidence of characteristic reactions due to any color. No evi-

dence was found supporting the reason given recently by a prominent company for painting the walls of their new factory green "for its energizing effect;" or for such statements as this one by Luckiesh:¹ "A workman in overalls working at a machine painted a 'boudoir orchid,' violates that cardinal principle—appropriateness. This color has its place but in this case defeats the purpose and may even make the visitor smile." Luckiesh assumes that orchid arouses a "boudoir" response whether or not it is seen in the boudoir. Our experimental results do not support this, but suggest that color, design and situation would all be necessary to arouse the response. Color alone would not do it.

Response to temperature. The view has often been expressed that orange, yellow, and red are warm colors; while blue, green, and violet are cool colors. In one account of color in the ceramic industry, the statement is made that kitchen utensils should not be red, as the housewife, already too hot in her kitchen, will take offense at the warm color. Luckiesh, an authority on color, says:

"In the work world little difficulty is experienced in keeping warm, perspiration is commonly associated with work. To feel cool is far more desirable in working places. Thus the color schemes are narrowed very definitely into cool ones." He suggests as a cool scheme to make workmen feel cool, "Olive green for the dado and lower portions of pillars and machinery; a very light tint of green for the upper walls, a near white for the ceiling."²

If there is such a temperature response to color it could hardly arise

from the physics of the situation. The infra red rays are the heat rays, and red being closer to them than blue, will usually be reflected by the same substances that reflect the infra red rays. It follows that a red barn is warmer to stand beside, and cooler to stand within, than a blue barn. In the same way a red coat would be warmer to stand beside, and cooler to stand within, than a blue coat; although the temperature difference would be too small to register. Similarly differences in the heat reflected by red or blue walls would be too small to register on a thermometer.

In order to examine the temperature effect of color, the following procedure was followed. At every fifteen minute rest period the men were asked to check on the mimeographed sheet whether they felt warm and, if so, whether "some" or "much." The order frequency of these judgments under the different lights is given below.

<i>Some heat</i>	<i>Much heat</i>
Blue	Green
Orange-amber	Yellow
Red	Red
Yellow	Blue
Green	White
White	(None recorded for orange-amber)

It is noticeable that white has the largest output and yet the smallest number of "heat" feeling responses both "some" and "much."

The inconsistency in these reactions (green, for instance, ranking low for "some" heat and high for "much" heat) indicates that the subjects felt no constant and definite temperature effects from the colors. The position

¹ *Seeing.* Luckiesh and Moss. P. 214.

² *Seeing.* Luckiesh and Moss. P. 212.

of white at the bottom of the list might possibly be interpreted as due to the cooling effect of white, but more probably indicates that nervous excitation was less and perception better with consequent comfort under white lights.

GENERAL CONCLUSIONS

1. White light produced conditions resulting in the least nervous excitation and the greatest output.

2. When the color deviated from white, nervous excitation, sometimes pleasant and sometimes unpleasant, resulted.

3. This response to color, noticeable in output, was still more definitely to be observed in the feeling reactions of the men. No constant response characteristic of any color was discovered, but pronounced reactions occurred which we have recorded under the undifferentiating term of nervous excitation. We conclude that special influences attributed to particular colors are responses suggested by tradition, or more frequently, a consequence of both color and situation. We do not find evidence that green would be energizing, or that any

color unaided by design or content would carry its associational effect into the workroom.

4. Results suggest that warmth and coolness in color do not mean temperature warmth and coolness. Because flame and blood are red, people assume that red always has a warming effect, forgetting that sunset reds, autumn leaf reds, and flower reds do not apparently make people feel warm.³

Warmth and coolness in colors must connote rather the meaning we have when we speak of warm and cool hearted people. It would hardly be recommended that cold hearted foremen be placed in shops, lest association with warm hearted men overheat the workers.

³ Our conclusion in regard to the temperature effect of color received this corroboration from the Eastman Research Laboratories to which we wrote. Mr. Lloyd A. Jones of their physics department answered as follows: "We have no real data, as to whether or not workers in the plant, where photographic materials are manufactured, feel warmer under red illumination than under green. From my own personal experience, however, I may venture this opinion. I do not believe that such an effect exists."

Suggestions for Measuring Recklessness

BY HAROLD E. BURTT, *Ohio State University*, AND ORIAN C. FREY, *New York University*

Among crane operators, truck drivers, miners, and workers in other more or less dangerous occupations, recklessness is a trait of personality regarding which both worker and employer need to be informed. Personnel workers developing selection procedures for such occupations may find it profitable to undertake to validate tests such as those here described.

Tests were given which ostensibly measured coördination or accuracy in adjusting apparatus, but in which some variation was possible in the mode of attack. It was suspected that the reckless individual would be tempted to make more hasty or fewer adjustments and that this tendency might be revealed by appropriate scoring. The tests involved such things as balancing a long rod, putting nuts on machine screws and filling graduates with water up to a designated mark. A criterion with an estimated reliability of .86 was obtained by means of a graphic rating scale. Six items of test score weighted in a regression equation yielded a multiple correlation of .60 with this criterion. Factor analysis of the intercorrelations between the tests suggests that the principal factor is one of haste, but there is a further suggestion that this tendency is modified somewhat by the apparent difficulty of the task and by the individual's awareness of his own mistakes.

THE present investigation is concerned with the possibility of developing laboratory tests to measure recklessness. As in other personality tests, it is necessary ostensibly to measure something else, and by analyzing the results, to get an indirect measure of the variable sought. In the present instance the subjects took what were apparently coördination tests, in which, however, some variation was possible in mode of attack. It was hoped that the test situation was such that the reckless person would be tempted to make a quick adjustment and let it go at that, while

the more careful person would make more and longer attempts. Such variables as number of attempts, time and accuracy were recorded. A number of tests were developed along these lines, a fairly reliable criterion of recklessness was secured for a group of subjects, various items of test score were correlated with the criterion and weighted in a regression equation, and the intercorrelations between tests were studied by the technique of factor analysis.

THE TESTS

After some preliminary work the program narrowed down to 7 tests

which were scored in various ways. These tests will be described briefly, but should not be considered as finally standardized. Our interest at the present time is in testing underlying assumptions and general principles.

Test 1 involved pouring water into small graduates to fill them to a designated level. Five graduates of 30 cc. capacity stood upright on the table with a dark line at the 5, 10, 15, 20 and 25 cc. levels respectively. The subject filled them to the designated marks from a 150 cc. beaker mounted on the end of a wooden handle 90 cm. long. He was instructed that both the time required and the accuracy of the result counted in his score. The time was noted in seconds and the error per graduate in units of half cubic centimeters.

Test 2 was a simple maze consisting of 21 rectangles 15 by 20 cm. laid out on the floor with chalk. Arrows indicated the direction of the possible pathways. At three points adjustable hurdles were introduced and the subject could step over a hurdle or take a longer pathway around it. One hurdle was set at a height equal to the distance from the subject's kneecap to heel; another was 5 cm. lower and a third was half this height. On each successive trial the bars on all three hurdles were lowered 13 mm. This progressive reduction was designed to tempt even the cautious subject to step over sooner or later. The test was discontinued when the subject took all 3 hurdles successfully on the supposition that he was now as reckless as he could be in that situation. The instructions stressed speed in traversing the maze, and accuracy in

stepping in the rectangles and pointed out the possibility of a shorter path over the hurdles or a longer one around them. Items of score were time, distance, and accuracy. The test was repeated with the subject carrying a 22 cc. test tube filled with water and instructed further that the amount of water in the tube after the trip constituted an additional element of score.

Test 3 involved balancing copper discs on the ends of small vertical steel rods. They were in groups of four. The diameter of the rods in each group was 1.3, 1.8, 3.2, 4.8 and 6.3 mm. respectively. The ends of the rods were machined and the burr filed. The discs were 19 mm. in diameter and about .56 mm. thick. The subject was instructed to place a disc on each rod and told that he would be scored on the time required and the number successfully balanced. He was not allowed to replace discs that fell off on the first attempt. The additional time required subsequently to replace them perfectly, constituted an additional item of score.

Test 4 involved placing hex nuts on machine screws which projected 6 mm. from the surface of a board. There were 4 groups of 5 sizes each as follows: 4-36, 6-32, 8-32, 10-32 and $\frac{1}{4}$ " S.A.E. Before the trial the nuts were placed in front of the proper screws and the subject screwed them on till they touched the board. He was told that he would be scored on the time taken and the number correctly placed on the first attempt. An additional score was the time required to replace those missed on the first attempt, as in test 3.

Test 5 involved placing a light weight on a platform suspended by

springs so that it would vibrate up and down as little as possible. The platform was a light metal triangle suspended by spiral springs running upward from the corners and, with the weight (a block of wood weighing 6.5 gms.) in place, vibrated vertically at 30 cycles per min. A point projected below the platform making contact with an adjustable mercury cup. The subject was told that he would be scored on the time taken to make the adjustment of the block and on the number of vibrations made by the platform after he released the block. The latter were recorded by an electric counter in series with the mercury cup.

Test 6 was a type of electrically recording maze with a variety of pathways but so arranged that the longer a pathway the wider it was.¹ The lateral pathways were of ample width for the average subject to negotiate without error, but alternate transitions between lateral paths could be made through any one of 8 openings 13 mm. long and varying in width from 4 mm. to 9.6 mm.—with the wider choices necessitating a longer course. This situation presented itself 10 times in the course of the maze. The subject was told that he would be scored on the time required to traverse the maze and the number of contacts he made with the edge. The total distance was likewise noted. The counter that recorded contacts was on the table beside the apparatus and audible to the subject.

Test 7 involved balancing a steel

rod so that it would remain upright as long as possible before falling over. The rod was 9 mm. in diameter and 160 cm. long. Its lower end rested on a metal plate directly below the center of a 32 cm. wire hoop mounted horizontally 145 cm. from the floor. The subject's thumb and forefinger were insulated by rubber glove fingers and a piece of very thin curved sheet brass was fastened to the thumb with rubber bands. A flexible wire led from this brass thumb-piece. The rod and base plate constituted one pole of a circuit which could be completed through either the thumb or the hoop. This circuit operated a 10 cycle signal magnet on a kymograph. The subject was instructed that he would be scored both on the time the rod remained in the air before touching the hoop and on the time he required to make the adjustment before letting go. A further score recorded was the actual number of adjustments made before finally letting go. The test was repeated with the subject required in addition to catch the rod again just before it touched the hoop. Failure to do this constituted an error and the other scores were as in the preceding.

THE CRITERION

These tests were given to members of a fraternity where there seemed a possibility of securing a fairly reliable criterion of recklessness. Several members who knew the group intimately appeared sufficiently responsible and interested to provide adequate ratings.

The criterion was obtained by means of a rather extensive graphic rating scale. Items were devised covering a

¹ Cf. Weiss, A. P., Lauer, A. R., et al. *Psychological Principles in Automotive Driving*. Ohio State University Studies. Psychology, no. 11, 1931, Ch. 15.

considerable range of situations in which a person might demonstrate various degrees of recklessness or carelessness. In the scale as originally executed by the raters there were 42 items. Fifteen of these dealt with automobile situations, 5 with care of personal appearance, 3 with betting, 3 with handling money, 5 with appearance of one's room, 4 with school work and 7 with emotional stability or miscellaneous factors. Two typical items are shown below. The items were

With 21 subjects, 42 items and 4 degrees of certainty a rather large task was presented to the raters. They spent on the average 7 hours in making the ratings.

After some experimentation in weighting the ratings in accordance with the certainty of the rater it developed that as satisfactory a method as any was to use the numbers 1, 2, 3 or 4 as checked in the boxes for the weights. The actual marks on the graphic scale were converted into

When driving with company in the car he

Turns head, takes both hands off wheel and gestures	Turns head, takes both hands off wheel	Turns head, takes one hand off wheel	Turns head, slightly and looks at you	Answers curtly and pays strict attention to driving
--	--	--	---	--

As far as climbing is concerned he would

Step from one 10-story window to another	Climb the face of 20-foot cliff	Climb from attic window to roof	Climb ladder to wash 2nd story window	Climb step- ladder
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staggered, the most reckless phrase sometimes being placed at the right and sometimes at the left. At the end of each line were 4 boxes labelled respectively 1, 2, 3, 4. The rater checked in one of these boxes for the given subject and item, to indicate the certainty of his judgment. A check in box 4 meant that he had actually observed the subject behave in that way. If he had not seen the subject act accordingly but was "positive" that he would do so if the situation presented itself, a check was placed in box 3. If he was "quite certain" that the subject would behave in that way the check went in box 2. A check in box 1 meant that the rater was uncertain as to how the subject would behave but felt it would be as indicated.

numbers by a 15-column stencil in which the larger score indicated greater recklessness. These numbers were each multiplied by the corresponding degree of certainty. Thus a maximum weighted score would be 15×4 or 60. All individual ratings were weighted in this fashion.

Investigation was next made of the reliability of the items with a view to discarding the least reliable. With 5 raters there would be for each item 10 possible intercorrelations between raters. The computation of all these seemed prohibitive, so the 2 most mature and presumably most reliable raters were selected and for each of the 42 items rank-difference correlations were calculated. As a result of this analysis 19 items were selected whose

correlations were .50 or greater. The other items were then discarded in making up the criterion.

The 19 most reliable items were then tabulated by subject and by rater. Then for each of the 5 raters the weighted total of the 19 items for each subject was computed. The average of all 5 raters constituted the final criterion score for each subject; but the intermediate computation was performed in order to obtain some notion as to the reliability of the final criterion. This reliability was approached by intercorrelating the 5

items of test score and it was a question of selecting the best ones. Some of those with obviously large discrepancies between test and criterion were thrown out after inspection. The remaining 26 were correlated with the criterion by the product-moment method. Those with the highest correlations were then intercorrelated. On the basis of this array 6 tests or items of score were finally selected to go in the regression equation. Selection was made on the basis of high correlations with the criterion and low correlations with other tests.

TABLE 1

Intercorrelations between the various measures of recklessness

	2	3	4	5	6	7	MEAN	STAND- ARD DE- VIATION	MEASURE OF RECKLESSNESS
1	.39	-.42	-.28	-.37	-.31	-.16	14.9	4.1	Criterion
2		-.26	-.02	-.35	-.37	-.41	5.3	2.9	Beaker error
3			.19	.13	.21	.04	11.2	2.2	Time, foot maze
4				.22	.41	.31	94.4	23.2	Time, nut
5					.67	.20	2.0	1.7	Adjust, rod
6						.37	11.3	3.3	Time, air rod
7							42.0	23.5	Time, stylus maze

raters using the total weighted scores for each subject. The 10 intercorrelations between raters ranged from .39 to .78 and averaged .56. The Spearman-Brown formula with N equalling 5 yields a correlation of .86. For the entire group of subjects the final criterion scores had a mean of 14.9 and a standard deviation of 4.1.

VALIDITY OF TESTS

Given the test scores as above described and the final criterion scores, the next step was to correlate the tests with the criterion to determine their validity. Altogether there were 43

The correlations finally used appear in table 1. Each entry represents the correlation between the variables noted at the end of the corresponding row and the top of the corresponding column. The means and standard deviations are given at the right of the correlation array. The nature of the variables is indicated briefly at the extreme right but will now be elaborated slightly. Variable 1 is the criterion obtained from the graphic rating scale. Variable 2 is the error in filling the graduates with water in half c.c. units and is in absolute terms, regardless of whether the subject poured too much

or too little water. Variable 3 is the time in seconds required to traverse the foot maze in the main series in which no water was carried. Variable 4 is the time required to put the nuts on the machine screws in the main series regardless of the number dropped. Variable 5 is the number of adjustments made in balancing the rod in the second part of the test in which the subject caught the rod before it touched the hoop. Variable 6 is the time the rod remained in the air in this same test. Variable 7 is the time in the stylus maze.

It will be recalled that the criterion was scored in such a way that a larger score indicated greater recklessness. The signs of the correlations with variable 1 show that greater recklessness goes with greater error in filling the graduates, fewer adjustments of the rod before letting go and shorter time in the remaining tests. The signs of these correlations are plausible. It may be noted further that the highest zero order correlation with the criterion is $-.42$, but that the intercorrelations of the tests are rather small for the most part. The latter is a bit encouraging from the standpoint of weighting the tests.

One other variable was considered before the foregoing correlations were taken at face value. It was possible that the subject's individual skill in coordination or motor control might constitute a variable that would cut across his manifestation of recklessness. Consequently the subjects were given a modified form of the conventional steadiness test which consists of holding a stylus in holes of decreasing size in a metal plate. Partial correla-

tions were computed between test scores on several tests and the criterion, with steadiness held constant. Since the correlations were not appreciably changed, the procedure was dropped from further consideration.

MULTIPLE CORRELATION

The Doolittle method was used to determine the regression equation for weighting the test scores. The equation thus obtained is as follows. (The subscripts refer to the variables indicated in table 1.)

$$X_1 = .39X_2 - .56X_3 - .04X_4 - .63X_5 + .14X_6 + .01X_7 + 22.18$$

The multiple correlation computed from the intercorrelations is $.59$. When the original test data are weighted according to the regression equation and the weighted scores correlated with the criterion of recklessness the result is $.61$. This compares favorably with many projects in which a battery of aptitude tests is correlated with a vocational criterion. It seems probable that we are on the right track in attempting to develop tests of recklessness by a type of coordination test in which the subject has a chance to manifest his natural tendency to proceed carefully or recklessly.

FACTOR ANALYSIS

Investigation was made of our intercorrelations to ascertain, by factor analysis, how many factors were necessary to account for the intercorrelations of the test. It was then possible to speculate as to the nature of the factors. The technique fol-

lowed was that outlined by Thurstone.² The loadings for three factors were found by this method and appear in table 2. Since the third factor residuals average about .04 in absolute value, it appears that three factors are ample to account for our results. The variables are listed in the first column and are the same as in the preceding table.

The first factor receives fairly heavy loadings in three of the tests; the heaviest loading is for the time the rod is in the air. A shorter time would

TABLE 2

Loadings for the three factors which account for test results

TEST	FIRST FACTOR LOADINGS	SECOND FACTOR LOADINGS	THIRD FACTOR LOADINGS
2	-.54	-.49	.28
3	.33	.12	.08
4	.47	-.20	.43
5	.67	-.28	-.43
6	.81	-.29	-.15
7	.52	.19	.11

indicate a hasty or careless adjustment. The next heaviest loadings are for small number of adjustments made with the rod, for errors in filling the graduates and for speed in the stylus maze. The first factor is perhaps one of haste in manipulation. The speed element is present in a number of the tests that have appreciable loadings in this factor. Reckless persons often do manifest untoward haste in their activities.

The second factor (loadings in the third column of table 2) is less clear.

² Thurstone, L. L. *A Simplified Multiple Factor Method*. Univ. of Chicago Bookstore, 1933. 25 pp.

None of the loadings are as large and some of them are of opposite sign from the first factor loadings. The largest is for errors with the beaker but the next in order are for rod adjustment and time in the air with the signs reversed. There is evidently a differentiation of the subject's attitude on the basis of the task. Perhaps this factor represents haste when the subject sees that he is being successful (filling the graduates) but a tendency to slow down when he cannot tell readily how he is succeeding (balancing the rod).

The third factor's principal loadings indicate a tendency to speed up in putting on the nuts but to slow down and make more adjustments in balancing the rod. Perhaps this factor represents haste in an apparently easy task but more care when the task appears difficult.

The first factor of haste seems reasonably clear; the explanations of the second and third factors should not be pressed. It is possible, however, that the reckless individual, in addition to manifesting haste in his task (first factor), may temper that speed somewhat in the light of the apparent difficulty of the task (third factor) or of his awareness of his success (second factor).

Our data seem to indicate that the reckless individual has a general tendency to speed up regardless, but has a further tendency to speed up when he *thinks* he can "get away with it" and a tendency to speed up when he *finds out* that he can "get away with it."

In conclusion, the experiment should not be regarded as final. It would be advisable to conduct similar experi-

ments or to develop further tests. However, the writers feel that the multiple correlation of .60 between the battery of tests and a rather reliable criterion of recklessness is an en-

couraging start and that the general principles underlying the present experiment are worthy of further exploitation in industrial fields by personnel workers.

Technological Change and Retraining

BY OTIS E. YOUNG, *State Teachers College, California, Pennsylvania*

The need for adequate programs of retraining is indicated by Dr. Young's study of workmen in the Pittsburgh district who were unemployed because of technological advance.

To ascertain whether technologically unemployed workmen possessed characteristics enough in common to warrant a program of retraining, 267 unemployed workmen in Pittsburgh were interviewed. The study showed that such workmen, regardless of their former occupation, were young enough at time of displacement to profit by additional training. Under present conditions, once unemployed, they are drifting into work they dislike, that has no possibilities of future financial rewards, and is beneath the level of their ability. Furthermore too much time is being wasted in the search for new employment. Where local demand for labor is declining a direct need for greater mobility is felt. A sound program of retraining would go a long way toward correcting the ills induced by present unsatisfactory conditions.

A SOCIETY that permits men to train for an occupation at their own expense, should take steps to insure the continuance of this occupation, or, failing to do this, should provide retraining to compensate for the loss a man sustains when scientific advancement eliminates the work he trained to do. Technological progress is excellent, and doubtless most jobs that the machine removes from human hands are somewhat irksome. Nevertheless human beings value jobs for many reasons. Adequately compensated, an irksome job can be enjoyable, if not for itself, at least for the satisfactions that can be obtained with its financial rewards.

The following study was conducted to find some factors upon which the necessity for retraining could be shown to depend. An effort was made to draw the subjects from as many

occupations as possible, to avoid showing trends vital to only one occupation. The study was conducted in the metropolitan area of Pittsburgh, one of the most highly industrialized centers in the United States. Since the data were gathered through personal interviews, whatever inaccuracies the study contains are those inherent in the interview technique.

The occupations from which displacement occurred are listed in table 1, along with the number of workers drawn from each.

These workmen were "well-settled," with none of the "floating" type among them. In fact if there is any one feature likely to render the study atypical it is the absence of "floaters." Table 2 shows the age at which the workers began the occupations from which they were later displaced.

The modal age at which entrance

into the occupation took place was 16-20, showing that, in all likelihood, this was the only occupation ever pursued by these workers. Barely more than 10 per cent were past 30 when they entered their work, and more than 50 per cent were under 21. Not only did these men select their life work early, but they were stable

TABLE 1
*Occupations upon Which the Study Is Based,
and Number of Workmen Each Furnished*

OCCUPATION	NUM- BER OF WORK- ERS
Glassworkers (Blowers, gather- ers, etc.).....	86
Miners (Loaders, drillers, etc.)....	40
Steel workers (Shearers, levermen, knucklers, etc.).....	24
Engineers (Stationary, dilley).....	14
Firemen (Stationary).....	13
Musicians (Theatre).....	13
Teamsters.....	9
Railroaders (Signalers, Substation men, etc.).....	8
Machinists.....	7
Air motor operators.....	5
Coke pullers.....	4
All others*.....	44
Total.....	267

* Other types of workers included those employed in zinc and tin mills, cement mixers and finishers, street car conductors, telephone operators, cabinet makers, painters, coopers, potters, bakers, etc.

workers, as shown by the number of years they had been on the job when machinery rendered their work obsolete. Their stability is shown in table 3, which indicates that, in general, the introduction of labor-saving machinery came at the period when these persons were fairly experienced. Table 3

shows them to be widely distributed, having spent from a few years to a life-time in their work. Table 4 shows the age at which they were supplanted,

TABLE 2
*Ages at Which Workers Entered Occupations
from Which They Were Displaced by
Machines, Shown in Number and Per-
centage*

AGE	NUMBER	PER CENT
11-15	34	12.73
16-20	114	42.70
21-25	66	24.72
26-30	24	09.00
31-35	13	05.00
36-40	11	04.12
41-45	3	01.12
46-50	1	00.04
51-55	1	00.04
Total.....	267	100.00

TABLE 3
*Length of Time Workers Had Held Jobs
From Which They Were Displaced*

YEARS ON JOB	NUMBER	PER CENT
1-3	31	11.60
4-6	37	14.00
7-9	30	11.24
10-12	33	12.36
13-15	23	08.61
16-18	26	09.74
19-21	16	06.00
22-24	20	07.50
25-27	11	04.12
28 and above	40	14.98
Total.....	267	100.00

and a glance will reveal that they were then in the prime of life. These men were also at the age when the responsibilities of life are greatest, families still young, homes unpaid for, and

expenses likely to mount for some time to come.

The stability of this group of workmen may be explained by the fact that of the 267 involved, 153 served apprenticeships varying from a few months to 7 years. The 7 year periods were served by French and Belgian glass blowers. The most common length of training was found to be 3 years. For those who reported terms of less than one year, it would probably be

TABLE 4

*Ages at Which Workers Were Displaced,
Shown in Number and Percentage*

AGE	NUMBER	PER CENT
11-15	1	00.04
16-20	10	03.74
21-25	24	09.00
26-30	53	20.00
31-35	45	16.85
36-40	39	14.60
41-45	34	12.73
46-50	33	12.36
51-55	17	06.36
56-60	6	02.24
61-65	5	01.87
Total.....	267	100.00

more correct to say they served as helpers rather than as apprentices.

Not only were these people stable workers, they also tend to be equally stable as residents of one community. In fact one is tempted to state that they would more readily find new employment if they were more mobile. Only 50 saw fit to move to a new location once they became unemployed. There are, of course, a number of explanations for this immobility. Many of the men were buying or had bought homes, and could not sell advanta-

geously. Others accepted undesirable jobs, rather than face the unpleasant task of re-establishing life in a strange location. Some were held by family ties; others lacked contacts that would enable them to secure employment elsewhere; still others were not of aggressive personality, and merely accepted the blow without making much effort to come back.

TABLE 5

*Length of Time Workers Were Unemployed
Before Finding New Positions*

TIME LOST	NUMBER OF WORK- ERS	PER CENT
No time.....	76	28.46
Part-time employment at once.....	10	03.74
1 month or less.....	11	04.12
2 months.....	4	01.50
3 months.....	11	04.12
4 months.....	4	01.50
5 months.....	4	01.50
6 months.....	13	05.00
7 to 11 months inc.....	3	01.12
12 months.....	20	07.50
13 to 23 months inc.....	24	09.00
2 to 3 years.....	24	09.00
3 to 5 years.....	10	03.74
Still unemployed.....	51	19.10
Not stated.....	2	00.74
Total.....	267	100.00

When displacement occurs, there follows a period during which the worker faces the perplexing and difficult question of finding new and suitable employment. Table 5 shows the length of time it took these workers to make such an adjustment.

It seems to be an established practice to give employment to workers holding positions on the higher levels, when the introduction of new machin-

ery makes the discharge of some of the force inevitable. Foremen and other executives will be retained in some capacity. This accounts for the large percentage of workers who lost no time at all. Valuable workers are retained if they care to accept other types of work. In spite of this policy, the amount of time lost between jobs is appalling. To account for this is not easy. It is not all due to the abnormality of the times, for loss of time occurs with surprising regularity, regardless of the date of displacement. Much of it is due to lack of local opportunity for reemployment; glutted local labor markets, due to sudden displacement of large numbers of men; shock due to finding oneself without employment after having been steadily employed for many years; and lack of knowledge concerning methods of securing new employment. Eventually most displaced workers will find jobs, though in recent years it has not been an easy task. Of the 51 displaced workers who were still unemployed when we made the study, 40 had been displaced since 1929.

Of the 216 who found new employment, 53 were able to secure positions in some measure related to those they lost, while 163 were obliged to accept jobs that were entirely different. According to this study, a man has about one chance in four of securing similar employment, if he loses his job through technological change. The experience of years is worth little to the man who has been displaced by machinery. Only 50 workmen stated that their previous experience was valuable to them in their new positions, while 166 stated that it was of no value.

When asked whether they liked their new work as well as the old, replies could not be obtained from all, but those received were quite revealing. Fifty-two answered that they liked the new work as well or better than the old while 156 stated that they did not. When the new job is similar to the old, it is generally popular, but unrelated work is seldom liked. It will take years for men to like their new work. While some of the dislike may be

TABLE 6

Comparison of Earnings in New and Former Employment (Figures Are Approximations Based upon Statements of 200 Workers)

	NUM- BER	PER CENT
New paying less than old (amount not stated).....	21	10.50
New paying four-fifths of old..	7	03.50
New paying three-fourths of old.....	7	03.50
New paying two-thirds of old..	14	07.00
New paying half of old.....	83	41.50
New paying one-third of old..	19	09.50
New paying one-fourth of old..	11	05.50
New paying one-eighth of old..	9	04.50
New paying same as old.....	18	09.00
New paying more than old....	11	05.50
Total.....	200	100.00

attributed to the nature of the employment, it seems altogether likely that most of it rests upon the question of income. Many of these displaced workers stated that they would prefer their new jobs to the old, since they were easier, if it were not for the low wages they now receive.

Technologically displaced workers were reemployed at considerably reduced wages. Table 6 shows in approximate form the differences in earnings in old and new jobs. That

the drop in earnings is entirely due to the introduction of improved machinery cannot be definitely concluded, since the period of greatest displacement has also been a period of falling wage levels. There can be little doubt however that men, no matter how skilled they may have been, are worth relatively little when they are forced to enter a totally unrelated line of work. It is not surprising, therefore, to find such a large percentage of these men able to earn less than half as much in their new occupations as they were able to earn in the old.

It is interesting to note the extent to which industries seek to retain the services of workmen whose jobs are taken over by mechanical devices. Of the 262 workers who made statements in regard to the offering of other employment by concerns bringing about their displacement, 115 stated that they were offered such employment, while 147 were dismissed without such an offer. Employers do not heartlessly throw all men out of employment when they introduce mechanical labor. In fact a number of men testified that they honestly believed that under the new conditions they were superfluous, but their services were retained, nevertheless. Nine out of every ten offers of substitute employment were accompanied by salary reduction.

RETRAINING IS NECESSARY

All of these findings indicate that a program of retraining is vitally neces-

sary. The following statements present the outstanding reasons why some definite steps should be taken to provide training facilities to fit men to take new positions equal in earning power and equally desirable socially to those they lost.

1. At displacement men are still young enough to profit by retraining, the modal age at displacement being 26-30, and the overwhelming number falling between 21-45.

2. Workers are spending too much time between losing one position and finding another.

3. The new positions are not liked by the workers and in most cases are not adequate for men of their ability.

4. The fact that such a large percentage of these workmen were highly skilled indicates that their mentality justifies additional training.

5. Workmen are being forced from skilled into unskilled labor and are losing all the value of their years of experience.

6. If these men could be rendered more mobile by retraining they could find more suitable employment at higher wages.

7. Too much financial loss is being suffered by displaced men at present. This has a disastrous effect upon themselves and their standards of living.

8. The social position of these men is jeopardized when they must become unskilled workers, after having been highly skilled.

News Notes

STATE LABOR LEGISLATION DURING 1933

The unprecedented amount and character of Federal legislation affecting the employer-employee relationship has tended to obscure the considerable number of labor laws enacted by the State legislatures during the past year. Probably more State labor legislation was passed, however, during 1933 than during any previous year. Twelve states established old-age pension systems. During the year seven enacted laws requiring the payment of a minimum wage to women and minors. Fourteen States ratified the proposed child labor amendment to the Federal Constitution and in nine states statutes were enacted supplementing the National Industrial Recovery Act.

ATTITUDES AND UNEMPLOYMENT

A report of the Personnel Research Federation's investigation of some of the psychological effects of unemployment has just been published under the title, *Attitudes and Unemployment: A Comparison of the Opinions and Attitudes of Employed and Unemployed Men*.

Realizing that unemployment does radically change the viewpoints and ideas of many men, the investigation described in this small book was designed to measure the nature and extent of these changes. Dealing with a group of professional engineers, the report describes how much bitterness toward the employing class has been engendered by employment, and how much morale has been lost. It tells how many more unemployed than employed men are favorably inclined toward communism, revolution, dictatorship, labor unions, and unemployment insurance, and how many more are critical of "rugged individualism," our system of government, religion, and a

variety of other matters. The extent to which fear of unemployment arouses antagonisms and lowers occupational morale is also described.

This report may be obtained from Archives of Psychology, Columbia University, or from the Personnel Research Federation, 29 West 39th Street, New York. Price, one dollar a copy.

SELECTION OF PERSONNEL FOR PENNSYLVANIA STATE LIQUOR STORES

On the 29th of November, 1933, the Pennsylvania General Assembly enacted a law to control the sale of liquor in the Commonwealth through a system of State Stores, giving power to a control board appointed by Governor Gifford Pinchot to carry out the provisions of the law. The law provides that the Department of Public Instruction shall select the personnel for the operation and administration of the stores by competitive examination. January 2nd, 1934, was set as the date for the opening of the stores.

Anticipate, if you will, the problem faced by the Department in a state with 900,000 men and women unemployed, with all voters in the State privileged to apply for one of the 2000 positions. We distributed 150,000 application blanks. Of the 59,000 returned, 34,824 applicants were declared eligible to compete, and 32,569 wrote the examination.

All this was done in a sufficiently expeditious manner that on Christmas day, seventeen days after the bill was signed, the Superintendent of Public Instruction notified 1300 competitors requisitioned by the Liquor Control Board that they were to report on a certain date for instructions! Since then 500 more have been appointed.

Nine batteries of examinations, and a special series for executives were prepared

and administered to examinees applying for thirty-three types of positions. Over 2,000,000 pieces of printed matter were prepared. With the exception of one test all the examination batteries were of the new type objective form.

The examinations were administered under the direction of Public School Superintendents in 36 cities. They were aided in each center by a corps of assistants, a representative from the Department of Public Instruction, and two State police officers. Fifty high school buildings were used.

The examinations were scored and ranked as provided by law under direction of examiners appointed by the presidents of Pennsylvania state-aided higher institutions. The scorers worked day and night for three days scoring the papers and ranking the 33,000-odd examinees.

The examinees were known only by number in the administration and scoring centers, and every precaution was taken as the law intended to make appointments on the basis of the couplet "what you had done and what you could do" rather than "what you had done and who you were." The only preference shown was that of 5 points in a hundred to those with military service as required by the law.

Unusual precautions were taken to safeguard the examinations from those who would defeat the intent of the law. Each candidate was finger-printed at the examination.

Because of the tremendous competition, an exceptionally high type of personnel has been selected. For example, out of the 244 State Store Managers appointed to date, 82 or $\frac{1}{3}$ are college graduates. Eighty per cent have had at least one year's educational training beyond high school and all are high school graduates. In addition, they are equipped with an average of 12 years of successful business and clerical experience.

An evaluation of these selections is now being made on the basis of which we will be able to ascertain the selectivity of the examination.

—WALTER B. JONES.

THE CURRENT OUTLOOK IN OCCUPATIONS FOR WOMEN

The Education Department of the National Federation of Business and Professional Women's Clubs has issued a series of thirty mimeographed pamphlets describing employment opportunities for women in as many occupations. It is not pretended that these reports are based on sophisticated research. They represent, rather, the carefully considered opinions of successful women in the various occupational fields.

MORE JOBS FOR COLLEGE GRADUATES

Employment opportunities for young college graduates are better than at any time during the past three or four years, according to a survey reported in the May 12 issue of *The Literary Digest*. This finding was based on returns of a questionnaire sent to university employment bureaus and editors of college newspapers. Improvement in employment conditions is limited to business and industry, prospects in the teaching field being still gloomy.

WHAT HAPPENED AT CLEVELAND

Ten of the major addresses presented at the last National Vocational Guidance Association convention held at Cleveland are printed in the May number of *Occupations, The Vocational Guidance Magazine*.

PERSONAL ITEMS

C. G. STOLL, Vice-president of the Western Electric Company, was recently elected President of the Personnel Research Federation.

MORRIS S. VITELES, University of Pennsylvania, will spend the coming academic year in Russia as a Fellow of the Social Science Research Council.

R. O. BECKMAN has joined the personnel division of the Farm Credit Administration.

T. H. A. TIEDEMAN, formerly of the Standard Oil Company of New Jersey, has succeeded Arthur H. Young as Secretary of Industrial Relations Counselors, Inc.

FORTHCOMING MEETINGS

June 4-6

*Annual Conference of the National Office
Management Association, Chicago*

August 22-25

*Seventeenth Annual Conference on Indus-
trial Relations, National Council of
Y.M.C.A.'s, Silver Bay, New York*

September 5-8

*Annual Meeting of the American Psycho-
logical Association, New York*

September 11-15

*Eighth International Psychotechnical Con-
ference, Prague, Czechoslovakia*

Personnel Books

EDITED BY O. MILTON HALL

HUMAN RELATIONS IN CHANGING INDUSTRY

By Harry Walker Hepner. New York: Prentice-Hall, 1934, 671 pp., \$5.00

Reviewed by PAUL S. ACHILLES, *Psychological Corporation*

The author of this worthwhile book may be criticized for straying from conventional psychological paths, but in this reviewer's opinion he is to be congratulated. It is time psychologists made such ventures and this is indeed a bold one. It offers no less than a "sustaining philosophy" for all of us, employer, employee and fellow worker, based on psychological foundations. Call it just another book on "the way out" if you will, but let anyone who belittles it write a better one.

Probably *a way forward*, rather than *a way out*, conveys Hepner's thought more clearly, for "on-going activities" in the individual and in industry are what he would have us learn to handle with greater "*industrial artistry*." He indulges in no Utopian dreams nor does he advocate passive acceptance of things as they are. His philosophy is courageous. Acceptance of change—yes. Greater adaptability—yes. Effort to direct and achieve desirable social changes—yes, but not over-night. Above all, seeking *meaning* in the total evolving scheme of things and finding some "*worthful participation*" in it. Perhaps it is only the philosophy of "welcome each rebuff" or "barrier" but the author makes an excellent case for it and for the contributions of psychology to the adjustment process.

The book is logically arranged. An introduction gives the premises chosen, of which the chief are: that meaningful living is the great objective of all persons in industry; that in spite of the stresses and strains of constant change, modern industry, if rightly interpreted, contributes to

worthful living; that the task of managers is to so interpret industry, and that the system of economy is relatively unimportant. The last is certainly a challenge to quit crying about the depression and do something practical about personal and personnel maladjustments!

Part One, consisting of two chapters, then presents the psychological principles for industrial relations developed around the concept that "the individual participates in life through adjustments." The author may have over-simplified and over-visualized the matter in the somewhat amusing illustrations, sketches, and diagrams, but this book is for students and laymen. It can also be read with profit, however, by any professional psychologist, not only for points, but for pointers on how to make points "stick."

Now comes the big departure for a book by an industrial psychologist. *To what* are we trying to adjust employees? The answer is no easy task but Hepner attempts it in Part Two. Your reviewer found this fascinating reading and maintains that it is a fine job. In fact, he feels that this able discussion of economic questions from the psychological point of view is exactly what has been needed to make psychology mean to the business man something other than tests or phrenology. The heading is "The Individual's Adjustments Take Place in a Changing World." There are seven chapters, nearly 250 pages, full of well-chosen and well-presented material which is frequently enlivened with pungent statements. Obviously it cannot be properly briefed in a review, but it takes you from

the status of the worker in Athens over "Man's Rough Road" (although this book of Keller's is not quoted) all the way to the status under NRA, with all the *pros* and *cons* of unemployment remedies, rugged individualism *vs.* planned economy, etc. It is excellent background material for any executive, and it ends with two thoughtful and helpful chapters on, "Enduring Principles," and "A Guiding Philosophy with Objectives for Leaders." Not to neglect the pungency: "A pound of good automobile costs less than a pound of butter"; "Owners, managers, and personnel men who prate about loyalty to the company, increased efficiency, and avoidance of waste, must also expect employees to say under their breath, 'Oh yeah'"; "Honest advertising is the business schoolroom for the masses; salesmanship at its best is the individual citizen's lesson under business tutorship. And the critics of modern advertising and salesmanship should realize that the educational methods and devices of business are no better or no worse than the educational methods of other institutions of society, such as the college, the church, and the government." Whatever side of the fence the reader may be on in regard to almost any moot question in business, he will be apt to find something to please and something to nettle him in

these pages, which, of course, is an admirable inducement to thinking.

Parts Three and Four deal with the "How" of "industrial artistry" and rightfully make the book of immediate and practical value to executives, supervisors, and personnel men. The thesis for Part Three is that intelligent management enables each individual to become a worthy participant. Each chapter treats specifically of methods: Methods for the Modern Executive; Methods for the Trained Personnel Man; Informal Methods in Group Employee Relations; Formal Methods in Group Employee Relations; The Case Conference Method—Group Discussions of Problems in Industrial Relations. Part Four is a useful collection of typical case problems, 166 of them, covering 117 pages, which furnish a wealth of splendid material for use in the case conference method of training supervisors and foremen in industry, or students of industrial relations and psychology in college classrooms.

A book that "blames it on" the managers and personnel men themselves, rather than on the parents, the schools, or even the bankers or the professors in Washington is refreshing. This one may well be pardoned for the indictment since it offers so much in the way of constructive thinking and practical teaching as to *the way forward*.

STUDIES OF THE LABOR MARKET

THIRTY THOUSAND IN SEARCH OF WORK. By Gladys L. Palmer. Philadelphia: Pennsylvania State Employment Commission, 1933, 93 pp., \$0.30

EMPLOYMENT TRENDS IN PHILADELPHIA. By Emmett H. Welch. Philadelphia: Pennsylvania State Employment Commission, 1933, 106 pp., \$0.30

Reviewed by M. R. TRABUE, University of North Carolina

The State Employment Commission, organized as a branch of the Department of Labor and Industry of the State of Pennsylvania, was "sponsored by far-seeing organizations of business men, social educators and labor leaders," and was "supported by appropriations from the State, the community, and the Spelman Fund of New York." This commission established in February, 1932, a public

employment office in Philadelphia "for the purpose of experimenting with standards and techniques that might be adopted by a nation-wide system of public employment exchanges." *Employment Trends in Philadelphia* and *Thirty Thousand in Search of Work* are not only valuable reports of basic data needed by local city and state authorities in planning effective social and economic programs, but they are splendid

demonstrations of the extremely useful types of labor-market analyses which a well organized system of public employment offices will be able to provide.

The data for the study by Welch were obtained chiefly from the reports of the United States Census Bureau for 1900, 1910, 1920, and 1930, although good use was also made of reports published by other agencies, such as the Industrial Research Department of the University of Pennsylvania and the U. S. Bureau of Labor Statistics. Numerous graphic charts show changes in the numbers of gainful workers in various fields from one census period to the next. In many respects this report has done for Philadelphia what a similar report by Dr. W. V. Bingham did for New York City.

Part I of Welch's report presents the trends for population and general employment as well as for many specific occupations in Philadelphia. Part II reveals the employment trends in manufacturing, with special attention to various industries which are of unusual importance in Philadelphia; and Part III reports a study of certain industries in which employment has a distinctly seasonal character. The author does not predict that the unemployment trends of the past forty years will each continue unchanged after the depression has become less severe, but he does supply some of the information upon which intelligent estimates for the future would need to be based.

Thirty Thousand in Search of Work is a statistical analysis of 31,159 applications for employment received at the public employment office from February 15 to October 15, 1932. In general these applicants were a "relatively stable group of workers, for over half of them had spent more than five years on the longest job they reported." They were somewhat

younger than the regular working population of the city. Two-thirds of the applicants were men, and more than four-fifths of them were members of the white race. More than eight per cent of those studied reported that they had received some college education, and more than half had gone beyond the elementary grades. Women applicants were somewhat younger on the average and somewhat better educated than the men applicants.

An attempt was made in this report to identify certain occupations in which an "active labor surplus" seemed to exist and to suggest re-training as a means for distributing some of these surplus workers to fields in which a "potential labor shortage" existed. This suggestion has real merit, but putting it into operation would involve much more than is indicated in the discussion. Experiments recently conducted by the Minnesota Employment Stabilization Research Institute indicate that successful re-training may be done on the basis of detailed analyses of the occupational qualifications of individual workers, but that the re-training of whole groups, or even of individuals, is likely to do more harm than good if it is not based upon scientific occupational diagnosis of each worker.

These two studies of the labor market in Philadelphia show something of the possibilities of obtaining the basic employment information that should be collected in every city and state. As Dr. Palmer says in her final paragraph: "The one thing which stands out increasingly is that until a nation-wide public employment service includes the collection of current statistics on labor demand and supply for local areas as a part of its regular function, we will continue to know next to nothing about the character of our unemployment problems beyond knowing that there is a problem."

EDUCATIONAL LEADERSHIP

Eleventh Yearbook, Department of Superintendence of the National Education Association of the United States, Washington, 1933, 528 pp., \$2.00

Reviewed by ORDWAY TEAD, *Harper and Brothers*

It is significant that the public educators of the country should devote an entire annual volume to the ramifications of the thesis of the universal need for leadership in education. It is evident that the influence of such progressives in education as speak out in the valiant and forthright *Educational Frontiers* (Appleton-Century, 1933) has had its leavening effect. A yeast is stirring in the educational world which should yield fine benefits in the ensuing years. Inevitably, perhaps, there is here a major emphasis upon the whole apparatus of education on its more structural and operating side. But a brave start at a philosophy and contemporary orientation is made in the first two chapters. "Teachers must," it is declared, "prepare to in-

struct in the true significance of the newly created and constantly gaining world relations." More might well have been said about the ways and means of giving content and effect to this declaration. But it is something for such a professional body to have started in this direction. The final chapter on the evaluation and rating of the leadership aspects of the school superintendent's work is an interesting attempt in a worthwhile direction. When one sees (Chapter VI) the statistics of the periodical reading of school superintendents throughout the country, one realizes that the need for self-scrutiny as to desirable intellectual pabulum for educators is a serious one.

COMPENSATION IN THE PROFESSIONS

By Lester W. Bartlett and Mildred B. Neel. New York: Association Press, 1933, 175 pp., \$2.00

Reviewed by HAROLD F. CLARK, *Columbia University*

This book is a most valuable discussion of some of the factors underlying compensation in the different professions. The first chapter presents and discusses the factors affecting supply and demand in the different professions. Chapter II compares the various professions. The material in this chapter dealing with income, while very helpful, is far from adequate. This is due not so much to any lack of ingenuity on the part of the authors as to the fact that adequate information is not in existence. Chapter III discusses some of the factors determining compensation. Chapter IV deals with the income needed. Chapter V discusses criteria of compensation. An attempt is made to set up certain criteria by which one can judge the ade-

quacy of the income in the different professions. Although this is an important and highly suggestive effort, the reviewer has the feeling that anyone acquainted with the demands of other occupational groups will note a certain tendency toward trying to defend relatively high income for the professions. It would perhaps be difficult to apply the same criteria to all occupations. What the country really needs is some method of determining the number of people not only in each profession but in each occupational group. This book provides the stimulating discussion of certain parts of the problem and should prove of very great value to all who are interested in the compensation of professional workers.

DYNAMIC SOCIAL RESEARCH

By John J. Hader and Eduard C. Lindeman. New York: Harcourt, Brace, 1933, 231 pp., \$3.50

Reviewed by BRUCE V. MOORE, *The Pennsylvania State College*

The authors justify the title of the book by the thesis. Social research should be dynamic in that it should implement social change. Social change will in the future be brought about primarily through the use of collective agencies, and an understanding of these functional groups is imperative for our time. Social research may become dynamic only when investigators abandon illusory attempts at so-called objectivity and disinterestedness.

The four parts of the book attempt to answer four questions: What principles are needed in confronting a social problem? How should a social philosophy enter into social research? How should subjective elements be used in a valid method of research? How may valid research techniques be applied? In addition to answers to these questions there is presented much specific information on the functioning of joint employee-employer committees in industrial management; for the study grew out of fact-finding investigations of these committees and is illustrated by much concrete material from them.

Part One of the book develops the point that scientific management has had little to contribute on the relations of workers to workers, workers to supervisors, workers to management, management to owner, and management to the public. "So long as management leaders continue to believe that the problem of human relations in industry is exactly what it has always been, namely the adjustment of one individual to another, there can be little advance." The purpose of the book is to show how to study group relationships in a qualitative way.

Part Two develops four concepts. (1) *Impulsion*: "The principal analytical terms of which impulsion is inclusive are needs, wants, desires, and purposes generated by individual human beings but expressing themselves in social, or collective modes."

(2) *Circumjacence*: "As a category to be used for psycho-social analysis, circumjacence is the term selected to describe those elements in the total situation which condition, limit, or channel the social group under observation, but only those elements which are reducible to psychological or sociological description." (3) *Interaction*: "That aspect of total social process which includes social stimuli, organizations of response to social stimuli, and overt responses together with the various relations revealed between the three terms." (4) *Emergence*: "Any evolutionary change in the quality of the consequences of joint committee action observable in the committee's impulsion, circumjacence, and interaction." In terms of joint committee action, emergents may vary all the way from acquiescence of employees under commands of management to a democratic integration of the interests of all through exploring differences and inventing a comprehensive conclusion.

Part Three is epistemological. Here is developed the corollary of the thesis, that the psycho-social investigator must start with values and a purpose. In contrast to the older conception of disinterestedness, the requirements of the new conception are: "(1) Research agent must accept the fact of his purposes and proceed to their clarification; (2) Research agent should cultivate those qualities of self-awareness which will allow him to take his interests into account; (3) Research agent should acquire the capacity to 'live into' the research situation; (4) Research agent should candidly include his values, as well as values as found in the research situation." Probably the most radical contention of the book is summarized in the statement that "reliability of fact will increase in proportion to the inclusion of purpose, not its fictitious exclusion." A further implication is seen in the statement that "social

statistics are not trustworthy unless the facts enumerated and collated have been examined by some other technique which is qualitatively distinguished from mathematics."

The description and illustration of six different techniques in Part Four will doubtless be the section of the book most used by practical students. These are techniques and devices by which facts or different aspects of reality are revealed through the relationship of a person (research agent) to another person as involved in the phenomena to be investigated, to an event as immediately observed, or to records of events in history. These techniques, in approximate order from the most subjective to the most objective, are interviewing, participant observing, observing by outsider, analysing cases, charting, and statistics. A chapter is devoted to each of these.

In interviewing the key principle is that "only when the interviewer and the interviewee are responding in the interest of a similar, if not an identical, goal can there be an eliciting of facts which is self-validifying." There should be reciprocal information-giving. "Enough information

should be introduced to enlist interest and curiosity, but not enough to induce feelings of bewilderment or inferiority."

The chapter on the technique of charting is illustrated by two charts of joint committee procedure. The exposition of this method of graphic analysis should prove very helpful to the practical investigator. It also furnishes a technique for teaching committee leaders, personnel officers, or others interested in improvement of committee procedure.

This book is not the kind that will have popular appeal. Treatises on epistemology and research method are not of that class. Even to research workers, many parts will be tedious. As the authors themselves state in the chapter on statistics, "not many research students who have been 'bitten' by the current fashion of 'counting' will be prepared to submit themselves to logical necessities of this sort," in selecting categories for classification of data before counting can begin. The critical investigator, however, not only receives guidance in his criticisms and evaluations of psycho-social research, but he also is stimulated to develop further canons and refine the techniques of research.

THE ECONOMY OF ABUNDANCE. By Stuart Chase. New York: Macmillan, 1934, 327 pp., \$2.50.

Two men are lost on a great desert. One has a full bottle of water, the other a bottle quarter filled. If they do not share, a fight will undoubtedly ensue. Transfer these men to a rowboat on Lake Superior. We would call them maniacs if they fought over the jugs under the changed conditions, surrounded with an abundance of fresh water. But all of western civilization is doing just that thing. We now live in the Economy of Abundance, and think and behave in the tradition of Scarcity. Industry and government must be radically altered to fit this inevitable new condition, lest we tip the boat and drown in our surplus.

This is the thesis which Chase expounds and defends with a formidable array of facts and figures and an engaging style.

He describes the forty-fold increase in physical energy made available during the past century, the enormous increase in productivity, the changed social and economic pattern which is being forced by the power age and its techniques. And he outlines specifically the terms upon which the abundance pattern will function. These terms must be brought about.

Stuart Chase's brilliant analysis should be read by every thinking man.

MORE POWER TO YOU! By Walter B. Pitkin. New York: Simon and Schuster, 1933, 298 pp., \$1.75.

Mr. Pitkin's latest best-seller is "a working technique for making the most of human energy." It is a journalistic encyclopaedia of scientific findings about energy consumption and of practical rules for increasing, conserving, and directing energy in everyday life. You can double your

energies, says Mr. Pitkin. "More Power to You!" is your manual for self-training.

MAKE YOUR OWN JOB. By Violet Ryder and H. B. Doust. New York: H. W. Wilson, 1933, 217 pp., \$2.00.

This book is intended to be of practical assistance to persons seeking to create employment for themselves, particularly in helping them to select and establish small, one-man businesses. A wide variety of unusual occupations are informally described. These include traveling beauty parlor, neighborhood nursery, professional shopping, manufacture and sale of soap, pottery, lampshades and other articles, subletting apartments, and compiling mailing lists.

PSYCHOLOGY AND THE NEW EDUCATION. By S. L. Pressey. New York: Harper, 1933, 593 pp., \$2.25.

This is no ordinary treatment of the field of educational psychology. "The aim has been not so much at a systematic presentation of psychological data and theory as at maximal usefulness in contributing to the understanding of educational problems." In consequence, the organization of subject matter is different from that usually found. Entire chapters largely new to the subject have been introduced, while some traditional materials have been omitted. The discussion of learning makes mention of no animal other than man. A chapter on the social psychology of the school years brings out the importance of social development during formative ages. The viewpoint throughout is practical and functional—and the result is a boon to teachers and students who wish to know how psychology can help them.

HEREDITY AND ENVIRONMENT. By Gladys C. Schwesinger. New York: Macmillan, 1933, 484 pp., \$4.00.

The age-old heredity-environment controversy is here given scientific treatment. This is an organized collection of the avail-

able scientific evidence regarding the development of the mental traits of man. Since there can be no science without measurement, the author first surveys the status of measurement of the major mental characteristics. She then summarizes what is known about the influence of environment in the development of intelligence. A chapter is included on points of view held by outstanding psychologists and psychiatrists with respect to the development of personality.

A STUDENT'S DICTIONARY OF PSYCHOLOGICAL TERMS (Fourth Edition). By Horace B. English. New York: Harper, 1934, 131 pp., \$.50.

This clear and concise dictionary of psychological terms will be useful to the layman as well as to the student.

A PERFORMANCE ABILITY SCALE: EXAMINATION MANUAL. By Ethel L. Cornell and Warren W. Cox. Yonkers: World Book Company, 1934, 88 pp., \$1.50.

A recognition of the need for more adequate non-verbal scales of mental ability is reflected in this volume. The authors, guided by their clinical experience with the New York State Education Department, have selected seven familiar performance tests for inclusion in their scale. Detailed instructions for administering and scoring are presented in the manual, along with experimental data bearing on the interpretation of discrepancies between Binet and Performance Scale scores.

WRITE IT RIGHT. By Ambrose Bierce. New York: Charles Bowman, 1934, 733 pp., \$1.00.

This little book is dedicated to precision in writing. It is made up of a "blacklist" of frequently misused words, each of which is followed by the correct word, and by an illustrative sentence. The author's comments are often witty. The book will be valuable to those who appreciate the need for precision in expression.

New Books

- BECOMING A WRITER.** By Dorothea Brande. New York: Harcourt, 1934, 148 pp., \$2.00.
- CAREERS FOR WOMEN: NEW IDEAS, NEW METHODS, NEW OPPORTUNITIES.** By Catherine Filene, ed. Boston: Houghton, 1934, 633 pp., \$3.00.
- COMMERCIAL CORRESPONDENCE COURSES AND OCCUPATIONAL ADJUSTMENTS OF MEN.** By Charles Bird and D. G. Paterson. Minneapolis: University of Minnesota Press, 1934, 27 pp., \$.50 (paper).
- THE ECONOMY OF ABUNDANCE.** By Stuart Chase. New York: Macmillan, 334 pp., \$2.50.
- A GUIDE TO CIVILIZED LOAFING.** By Harry Allen Overstreet. New York: Norton, 1934, 223 pp., \$2.00.
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- MINERS AND MANAGEMENT.** By Mary Van Kleeck. New York: Russell Sage Foundation, 1934, 391 pp., \$2.00.
- THE NEW DEALERS.** By Unofficial Observer. New York: Simon & Schuster, 423 pp., \$2.75.
- PERMANENT PROSPERITY AND HOW TO GET IT.** By John Bauer and Nathaniel Gold. New York: Harper, 266 pp., \$2.75.
- THE RETIREMENT OF PUBLIC EMPLOYEES IN VIRGINIA.** By Rowland Andrews Egger and Others. New York: Appleton-Century, 285 pp., \$4.00.
- TECHNICS AND CIVILIZATION.** By Lewis Mumford. New York: Harcourt, 1934, 506 pp., \$4.50.
- SUPPLY AND DEMAND OF COLLEGE TEACHERS.** By James G. Umstattd. Minneapolis: University of Minnesota Press, 1934, 41 pp., \$.50 (paper).

Current Periodicals

PREPARED BY LINDA H. MORLEY, *Industrial Relations Counselors, Inc.*

ACCIDENTS

United States. Labor Statistics Bureau. Accidents in manufacturing industries, 1926 to 1932. *Monthly Labor Review*, Dec. 1933, Vol. 37, p. 1388-1394.

Annual figures covering both frequency and severity rates. The tables, arranged by industry, cover each year from 1926 to 1932.

BUDGETS AND COST OF LIVING

Russell Sage Foundation Library. Family budgets and costs and standards of living—a selected list of recent references. New York: Aug. 1933, 4p. Bulletin No. 120.

Consists largely of magazine references since June, 1932. Practically all the entries are annotated.

CHILD LABOR

United States. Labor Statistics Bureau. Child labor in the United States, 1932. *Monthly Labor Review*, Dec. 1933, Vol. 37, p. 1361-1373.

Statistical analysis based on the number of employment certificates issued. Much of the information given is grouped by cities and comparisons made with 1929 and 1931.

CREDIT UNIONS

Why a credit union? *Factory Management and Maintenance*, Mar. 1934, Vol. 92, p. 113, advertising page 54, 56.

The plan of the Graton and Knight Co. is the basis of this article. Some statistics are also drawn from the experience of Armour and Co.

EDUCATION

ARMSTRONG, G. H. (Director of Education, International Business Machines

Corp.). Employee education pays dividends. *Executive Service Bulletin*, Feb. 1934, Vol. 12, p. 3-4, 6.

Description of the program of the International Business Machines Corporation.

COHN, FANNIE M. (Executive Secretary, Educational Department, International Ladies' Garment Workers' Union). New era for labor education. *American Federationist*, Feb. 1934, Vol. 41, p. 157-160.

Discussion at the Workers' Education Bureau Conference, October 2, 1933, Washington, D. C. This article describes briefly the adult education program of the International Ladies' Garment Workers' Union.

EMPLOYEE REPRESENTATION IN MANAGEMENT

DUTTON, H. P. (Associate Editor, *Factory Management and Maintenance*). Works council—yes or no? *Factory Management and Maintenance*, Dec. 1933, Vol. 91, p. 479-481, advertising page 30, 32.

The point of view of management with a capital M, on this phase of the NRA. Mr. Dutton points out the stand which he thinks employers can properly take in the matter.

Chrysler Corporation. Employee representation in Chrysler plants. *Factory Management and Maintenance*, Nov. 1933, Vol. 91, p. 453-495, advertising page 30, 32.

Rules and regulations of the plan in operation in this company.

Goodrich (B. F.) Company. Goodrich cooperative plan. *Factory Management and Maintenance*, Dec. 1933, Vol. 91, p. 519-520.

Text of the employee representation manual for this company, giving the rules and regulations.

STUART, C. J. Experience in employee representation; ten years with a works council. *Factory and Industrial Maintenance*, Jan.; Feb. 1934, Vol. 92, p. 1-4; 53-55, advertising page 44.

Methods employed in the installation and management of this plan, with a summary of the results obtained over a period of years. The plan described was used in a large company having branches.

EMPLOYMENT

CROXTON, FRED C., AND FREDERICK E. CROXTON. Fluctuation of employment in Ohio in 1931 and 1932 and comparison with previous years. *Monthly Labor Review*, Dec. 1933, Vol. 37, p. 1307-1327.

A statistical analysis showing, among other things, that a decrease of 15.8 per cent in maximum employment took place between 1931 and 1932.

National Industrial Conference Board, Inc. Labor changes in 1933. *Conference Board Bulletin*, Jan. 20, 1934, Vol. 8, p. 1-7.

A summary of significant findings of the N.I.C.B. monthly inquiry into employment, hours and earnings in manufacturing industries from January to November, 1933. This statistical analysis reflects the influence of NRA and its administration.

EMPLOYMENT EXCHANGES

AMIDON, BEULAH. Route back to work; the U. S. Employment Service with its state and local branches. *Survey Graphic*, Mar. 1934, Vol. 23, p. 101-104, 134-135.

The plans and first accomplishments of the new U. S. Employment Service, established under the Wagner-Peyser Act, and of the Emergency Reemployment Service, superimposed upon it, are set forth. The article is based on a week in the headquarters at Washington.

CALLEN, E. GLENN (Department of Political Science and Sociology, Nebraska Wes-

leyan University). Control of employment agencies in the United States and abroad. *Information Service*, Feb. 17, 1934, Vol. 13, p. 1-4.

The situation in the United States examined in the light of the International Labour Office Draft Convention on this subject. Many decisions already handed down by United States courts are cited.

EYE STRAIN

LUCKEISH, MATTHEW (Director, Lighting Research Laboratory, General Electric Co.). Workers are human seeing-machines; light their way to efficiency. *Factory Management and Maintenance*, Mar. 1934, Vol. 92, p. 93-96.

Emphasizing the physiological effect of eye strain, the results of a survey of 1,907 plants in 182 cities are tabulated.

GERMANY

HAM, WILLIAM T. (Harvard University). Labor under the German Republic. *Quarterly Journal of Economics*, Feb. 1934, Vol. 48, p. 203-228.

This article is particularly valuable at present, giving as it does a brief historical summary of conditions leading up to the present crisis in Germany.

HEALTH

CROWDEN, G. P. (Lecturer in Industrial Psychology, London School of Hygiene and Tropical Medicine). Practical value of physiology to industry. *Human Factor*, Feb. 1934, Vol. 8, p. 57-69.

Part of a paper read before the Department of Industrial Cooperation at the British Association Meeting in Leicester, September, 1933.

The author summarizes a number of recent researches in the application of physiology to industry in such matters as muscular work and fatigue, noise, lighting and ventilation; and describes hitherto unpublished work of his own on the effect of lining topees and policemen's helmets with metal foil. A bibliography is included.

REDDEN, W. R. (M.D.; Director, First Aid, New York County Chapter, American Red Cross). Try cleanliness first. *National Safety News*, Feb. 1934, Vol. 29, p. 15-17.

"Before experimenting with fancy methods for the prevention of occupational dermatoses, why not try simple methods of personal and environmental cleanliness?"

HOURS OF WORK

FLANDERS, RALPH E. (President, Jones and Lamson Machine Co.). Would the thirty-hour week relieve or cure? *Factory Management and Maintenance*, Mar. 1934, Vol. 92, p. 120-123.

Argument is aimed to prove that a reduction in working hours is not advisable. Six "examples" are worked out on a percentage basis to illustrate the points made.

United States. Labor Statistics Bureau. Hours and earnings in foundries and machine shops, 1933. *Monthly Labor Review*, Dec. 1933, Vol. 37, p. 1459-1474.

Among other things, this study shows that foundry workers' earnings averaged 48.2 cents per hour and \$14.25 per week in 1933 as compared with 60 cents per hour and \$20.06 per week in 1931 and 62.4 cents per hour and \$30.39 per week in 1929.

INCOME STATISTICS

KUZNETS, SIMON. National income, 1929-1932. National Bureau of Economic Research *Bulletin*, Jan. 26, 1934, No. 29, p. 1-10.

These estimates are the result of a study made by the Department of Commerce in cooperation with the National Bureau of Economic Research. They show changes in the total net product of the economic system by types of payment and by industrial source.

JOB ANALYSIS

DOOLEY, C. R. (Personnel Manager, Socony-Vacuum Corporation). Philosophy and procedure of a job analysis. *Personnel*, Feb. 1934, Vol. 10, p. 67-71.

The methods in use by the Socony Vacuum Corporation.

LABOR PRODUCTIVITY

BOWDEN, WITT (United States Bureau of Labor Statistics). Productivity, hours and compensation of railroad labor. *Monthly Labor Review*, Dec. 1933, Vol. 37, p. 1275-1289.

This is the first of three articles on railroad labor. Discusses trends affecting all employees of class I railroads, 1916 to 1933.

NATIONAL INDUSTRIAL RECOVERY ACT

BUTLER, HAROLD (Director, International Labour Office). Course of American recovery. International Labour Office, Jan. 1934, Vol. 29, p. 1-20.

This article is based largely on first hand observation by Mr. Butler and Mr. P. W. Martin while on a visit to this country. It gives a general sketch of the present situation and suggests the course of events which has brought it about. It is, of course, written from the European point of view.

FRASER, CLARENCE (Division Traffic Supervisor, Bell Telephone Co. of Canada).

Impressions of the NRA in action; a week in New York. *Labour Management*, Feb. 1934, Vol. 16, p. 28-30.

Written by an English industrial relations manager.

GREEN, WILLIAM (President, American Federation of Labor). National Labor Board; an open letter from President Green to the members of federal unions. *American Federationist*, Jan. 1934, Vol. 41, p. 24-29.

Details of the procedure necessary in filing complaints with the National Labor Board. Written for the employee, but equally valuable to the employer.

HAY, WILLIAM WREN. Rôle of statistics under the new deal: pitfalls in faulty interpretation. *Annalist*, Feb. 2, 1934, Vol. 43, p. 219-220.

Critical discussion of the statistical output of government departments under present conditions. Not very comprehensive, but illustrated by examples.

HERRMANN, MILTON C. (President, Herrmann Handkerchief Co.), and E. JOHNSON COIL. Management of an industry; the plan offered by the code of the handkerchief industry. *Bulletin of the Taylor Society*, Aug. 1933, Vol. 18, p. 82-85.

The scientific management point of view applied to the provisions of one code in an effort to see wherein the four major principles of scientific management, viz., research, standardization, control and coöperation are inherent in the provisions.

HILLMAN, SIDNEY. NRA, labor, and recovery; an address at the American Academy of Political and Social Science, January 6, 1934, broadcast over a national hook-up. *Advance*, Jan. 1934, Vol. 20, p. 12, 19.

A critical estimate of the labor provisions of the codes by the President of the Amalgamated Clothing Workers of America.

International Labour Office. Hours of work provisions under the National Industrial Recovery Act. *International Labour Review*, Jan. 1934, Vol. 29, p. 84-107.

An analysis of the hours provisions of codes which were in effect up to October, 1933, and the President's Reemployment Agreement. The article examines the subject under the following headings: normal hours of work; exemptions and exceptions; reports and supervision.

SLICHTER, SUMNER H. Labor under the National Recovery Act. *Harvard Business Review*, Jan. 1934, Vol. 12, p. 142-163.

Analysis of the provisions, implications and economic effects on labor under the NRA.

TEAD, ORDWAY (Editor, Economic Books, Harper Bros.; Lecturer on Personnel Administration, Columbia University). Interpretative forecast of the NRA; is the trend toward Fascist or socialized self-government. *Bulletin of the Taylor Society*, Aug. 1933, Vol. 18, p. 78-81; also in: *American Federationist*, Jan. 1934, Vol. 41, p. 17-23.

Convinced that "some kind of permanent national economic organization is bound to eventuate in this country in the next few years" Mr. Tead therefore urges upon his readers the acceptance of the "New Deal" and its implications.

NURSING SERVICE

LOCKHART, LEONARD P. (Medical Officer, Boots Pure Drug Co.). Place of the nurse in modern industry. *Industrial Welfare and Personnel Management*, Jan. 1934, Vol. 16, p. 18-23.

Though based on English practice, the general statement and the opinions expressed in this speech are applicable anywhere.

PSYCHOLOGY

RODGER, ALEC. Why and how the vocational psychologist studies temperament. *Human Factor*, Feb. 1934, Vol. 8, p. 48-56.

The greater part of a paper read before Section J (Psychology) at the British Association Meeting at Leicester, September, 1933.

The vocational psychologist has long emphasized the importance of the study of temperament. In this paper Mr. Rodger discusses the meaning of the term, and describes how the vocational psychologist daily tackles the problem of investigating the elusive characteristics which it covers.

SAFETY

HULBERT, HAROLD S. (M.D.; F.A.C.P.). What does a reemployed worker think about? *National Safety News*, Feb. 1934, Vol. 29, p. 9, 60.

This program for getting safety ideas across in a difficult situation could be used profitably by other departments.

KEEFER, DEAN (Director, Industrial Division, National Safety Council). Foremen as teachers; the successful foreman causes his men to learn correct habits and to think. *National Safety News*, Feb. 1934, Vol. 29, p. 18.

Brief outline of the necessary steps in teaching safety and of the necessary qualifications in the teacher himself.

LOGIE, J. J. (Supervisor of Employment and Safety, General Tire and Rubber Company). Outside troubles make unsafe workers; even trivial disturbances off the job may pave the way for an accident. *National Safety News*, Feb. 1934, Vol. 29, p. 7, 32.

Psychological aspects of accidents in the plant.

SCIENTIFIC MANAGEMENT

HENDERSON, P. E. (Comptroller, Mount Holyoke College). Scientific management in college administration. *Bulletin of the Taylor Society*, Feb. 1934, Vol. 19, p. 8-9, 17.

This paper which was presented to a meeting of the Taylor Society, New York, December 8, 1933, offers a rather detailed description of an actual installation.

UNEMPLOYMENT INSURANCE

PARKINSON, R. (Manager of Personnel Activities, American Optical Co.). Suggestions concerning unemployment insurance. *Personnel*, Feb. 1934, Vol. 10, p. 86-95.

A general article, written from the point of view of an industrial relations executive who has had experience in handling an unemployment benefit plan.

UNEMPLOYMENT RELIEF

United States Labor Statistics Bureau. Subsistence-homestead movement under National Recovery Act. *Monthly Labor Review*, Dec. 1933, Vol. 37, p. 1327-1330.

The two projects now under way are described. The one is "Arthurdale" at Reedsville near Morgantown, W. Va.; the other at Dayton, O.

WAGES

SCHOLSSBERG, JOSEPH. Evolution in terminology. *Advance*, Jan. 1934, Vol. 20, p. 11.

On account of the wage regulations in NRA codes, the definitions of wages which have been used at different stages of economic advance and collected in this article, are of particular interest at the present time.

United States Labor Statistics Bureau. Minimum wage legislation in the United States. *Monthly Labor Review*, Dec. 1933, Vol. 37, p. 1344-1354.

Sixteen states now have minimum wage laws, of which number, seven were passed during 1933. The principal provisions of all minimum wage laws in effect in 1933 are given.

WOMEN

MILLS, RALPH G. (M.D., Wiley Smith Clinic). Two-shift employment of women—a discussion of certain hygienic and moral questions where the two shifts do not cover midnight to morning. *Industrial Medicine*, Jan. 1934, Vol. 3, p. 25-30.

A defense of night work for women based mainly on physiological considerations.

The Photograph on the Application Blank

BY RICHARD WELLINGTON HUSBAND, *University of Wisconsin*

Dr. Husband, author of the recently published book on "Applied Psychology," demonstrates that a man's photograph reveals nothing about his aggressiveness, self-assurance, social adaptability, initiative, or other personality traits of interest to prospective employers.

Some employers study the photographs of applicants in order to ascertain (1) intelligence, (2) specific vocational suitability, (3) personality traits, or (4) physical characteristics. Previous investigators have shown that photographs give no indication of intelligence or vocational aptitude. The present investigation shows that people's personality traits cannot be ascertained from study of their photographs. The use of photographs, therefore, should be confined to such physical characteristics as may influence a man's success on a job.

EMPLOYMENT procedures utilize information from a number of sources. The more important ones, stated largely in chronological order, are: (1) Formal application; (2) Photograph; (3) Recommending letters; (4) Interview; (5) Tests; and (6) Physical examination.

Unless the applicant is on the premises, it is impossible to obtain all this information. In corresponding from a distance, only the first three steps are possible; and of these it is the photograph which particularly concerns us in this study. Very frequently a person is requested to include his picture with the formal application or other correspondence. As such, it must be presumed to have some value; that is, it must provide information which will assist in predicting success.

There are at least four possibilities in interpreting a photograph: (1) intelligence, (2) specific vocational suitability,

which assumes that characteristic facial appearances go with a doctor, a teacher, a salesman, or a machine operator; (3) personality traits; (4) physical or structural characteristics.

The first two possibilities may be ruled out immediately by the findings of previous experiments. Pintner (3) and others have found that estimates of intelligence from photographs have no better than chance accuracy. We might point out in passing that Pintner's pictures were of individuals ranging in intelligence from feeble-minded to very bright, which is a much wider range than would be found among applicants for any particular position.

Landis and Phelps (1) found that vocational choice and vocational success cannot be predicted from photographs. Pictures were used of persons at time of college graduation and twenty-five years later. There was no accuracy in predicting what occupa-

tion a person might choose, what he had entered, what success he might have, or what he may have had. Paterson and Ludgate (2) have likewise shown that blond and brunette complexions do not necessarily indicate characteristic personality traits, as has often been supposed. Sheldon (4) has demonstrated that shape of face, measured in a large number of ways, does not correlate with any personality measure.

We are, therefore, limited to the last two possibilities. It is the purpose of this study to attack the third. We desire to see if personality traits often considered necessary for vocational success can be predicted from photographs.

PROCEDURE

Photographs were made of 20 college men, 20 college women, and 12 men ranging from 30 to 60 years, in various occupations. These pictures were standardized as far as possible, in respect to an average serious expression; business suits worn; no hats; neutral background; uniform distance; etc.

The individuals were rated from A (highest) to E on 18 personality traits: stubbornness, aggressiveness, thoroughness, self-assurance, trustworthiness, emotional control, sustained energy, executive ability, independence, initiative, introversion, persistence, refinement, reliability, social adaptibility, tact, vivacity, and coöperation. All subjects were known intimately by the writer or by one of the other collaborators,¹ and all had

been known by one of us for a period of at least two years, so our ratings should be valid. Certainly behavior over a long period of time should show the "characteristic modes of behavior" of which personality is made. In some cases of doubt we consulted with other intimate friends.

The personalities of the subjects were rated after study of their photographs by about fifty advanced students in psychology on the same basis as the criterion—from A to E, on each of the 18 traits listed above. Raters were instructed to make their median rating about C, and to be rather sparing of A and E grades. Of course they were told not to score any individual whom they happened to know personally.

RESULTS

In treating results we have limited calculations to ratings made by individuals whose experience and advanced study of personnel and personality should produce fairly reliable data.

(1) *Means*. When we averaged the ratings given by a large number of individuals on the traits of each subject, there appeared a general tendency toward a median, with a grouping between a B and C level. This shows a slight tendency toward generosity. In fact, very few ratings below C were given.

(2) *Standard Deviations* may be taken as showing evidence of the halo tendency. Low variability suggests that an individual has been rated in terms of a single impression, while a high amount of variation would mean that good and poor points are recognized as such and are not smoothed over by a general composite opinion.

¹ Miss Virginia Weidemuller and Mr. Frank Currier obtained many of the subjects and assisted in tabulating the ratings.

The standard deviations of the ratings are from photographs just about one letter grade, while those of the criterion scores are somewhat greater. This, then, if our previous reasoning may be assumed to be correct, gives a statistical demonstration of the presence of a halo tendency.

TABLE 1

Correlations between ratings of personality by study of photographs and by acquaintance

RATER	FIVE COLLEGE MEN				
	A	B	C	D	E
1	+ .37	+ .06	- .28	- .18	+ .14
2	+ .03	- .01	+ .02	+ .12	.00
3	+ .41	+ .09	+ .07	- .07	- .15
4	- .43	+ .49	+ .24	+ .32	.00
	FIVE COLLEGE WOMEN				
	M	N	O	P	Q
5	+ .56	+ .29	+ .12	- .11	+ .24
6	+ .45	+ .38	- .24	+ .51	- .09
7	- .03	+ .22	+ .30	+ .34	- .06
8	+ .49	+ .31	+ .33	+ .32	+ .56
9	+ .31	+ .25	+ .20	+ .63	
	FIVE BUSINESS MEN				
	V	W	X	Y	Z
10	- .45	- .05	- .53	- .57	- .05
11	.00	- .07	- .11	+ .40	- .15
12	- .08	- .02	+ .02	- .03	- .02
13	+ .42	- .23	- .34	- .43	- .02

(3) *Correlations* were computed between the criterion scores (ratings on the basis of acquaintance) and the ratings made by a few of the best trained students. The average of 64 correlations was only slightly above zero. Individual coefficients ranged from $-.57$ to $+.63$. No one rater

was consistently accurate in his judgments, nor was any subject validly rated by a number of judges. The only evidence of consistency was on the part of an unmarried psychology instructor in rating college girls! But when he marked college men and business men, his correlations dropped to zero. Two graduate students, whose major interests were along personnel and vocational guidance lines, had more negative than positive coefficients.

COMMENTS

Analysis of some of the individual ratings disclosed two major sources of fallacy which undoubtedly figure to a great extent in practical personnel work. Two men who were rather handsome but not especially bright or colorful in a personal way, were uniformly given very high ratings. On the other hand, one of the older business men, who was not very prepossessing in appearance and who happened to have a grimaced smile when the camera was snapped, was given about the lowest ratings of all the subjects. Yet he was the owner of the largest store in a city of several thousand, and was highly admired and respected in his community.

What might be termed the "photographic illusion" is well known to all of us. Many snapshots turn out rather badly because one's face is caught while shifting expressions, with a self-conscious or embarrassed smile, while squinting into the sun, etc. A motion picture strip would overcome these difficulties, but would not be very practical. Movies would also show *behavior*, rather than a static pose.

RECOMMENDATIONS

Since the correlations, in the main, are inconclusive, and since there seems to be very little differentiation among estimates of merit, the use of a picture for judging personality is practically, if not entirely, valueless.

This eliminates our third suggested use for the photograph with the application blank, that of estimating separate personality traits. It leaves only the fourth, that of discovering certain physical characteristics. Some of these may be very important, especially for positions entailing social responsibilities. A man may have certain objectionable features, such as facial disfigurement, belonging to an undesired race, bad skin, premature baldness, etc. These factors have nothing to do directly with personality or ability, but may influence success on the job,

inasmuch as such traits may affect the attitudes of persons with whom one deals. Certain states used to demand that public school teachers not have bobbed hair. These instances are all negative, but a photograph may have positive value also. The writer encountered a humorous example where a man obtained a position as superintendent of schools in spite of being only 21, because his picture disclosed his premature baldness, which made him appear around 35.

We urge, therefore, that interpretation of the photograph accompanying the application blank be confined to physical traits which may affect social success in the work, since it has been demonstrated that intelligence, vocational suitability, and personality traits cannot be estimated with better than chance accuracy from a photograph.

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The Practical Use of Tests

In Appraising Occupational Fitness

BY GARRET L. BERGEN, *The Adjustment Service, New York*¹

Mr. Bergen judiciously appraises the use of tests in supplementing work history records, measuring the effective results of education, and predicting success in specific occupations.

I SHOULD like to see some competent Committee on Terminology unearth a term which we might substitute for the words, "psychological tests." The experiences which the present term has gone through during the last fifteen years have created a number of implications which often cloud our thinking on the subject. It is a rare conference of personnel workers, guidance counselors, educators, sociologists, and the like, which has not included on its program at least one session devoted to a discussion of the latest developments in psychological testing. Moreover, few test sessions have escaped becoming pitched battles. There are definite schools of thought whose members welcome such opportunities to air their views. To many guidance and employment practitioners the term "psychological test" is like a red flag to a bull, and they attack with the zeal of partisans. Those who call themselves "psychometricians," on the other hand, rise with equal zeal to the

defense. Too often the resultant discussion is more emotional than rational. Perhaps a new term might eliminate the "stereotypes" which, in my opinion, block the way to clearer consideration of individual differences.

I have no substitute term to offer. I wish I had. It may clear the air somewhat if we recognize that tests are not cabalistic divining rods. They are merely objective applications of our everyday common-sense approach, in which we use a sample of an individual's behavior as an illustration of what his later behavior is likely to be in the job situation. Every employment interviewer observes an applicant's behavior with this end in view. The foreman ordinarily starts apprentices on selected tasks which may be used to gauge their potentialities for other work in the department. Any such representative task or situation, which may be used to predict, roughly or accurately, the way in which the individual will do the work represented, is a "psychological test."

Tests differ from traditional methods not so much in form or content as in the process of objectification to which they have been exposed. This ob-

¹ This paper was presented on March 23, 1934 before the Metropolitan Conference on Employment and Guidance Procedure, arranged by the Welfare Council of New York City.

jectivity provides the major justification for their use. Tests, whatever their faults (and there are many), are not subject to some of the errors which creep into interview judgment. Tests do not develop aversions to green ties or preferences for blonds. Tests do not accept personal habits as indices of work habits. Viteles has pointed out that many an applicant for a stenographic position has been refused employment because speech and movement are slow, on the assumption that she will likewise show an absence of speed in taking and transcribing dictation. The phrasing of test questions is standardized and not subject to the bias, unintentional or otherwise, of the interviewer. Tests do not interpret an applicant's alert look and sparkling eye as signs of mental alertness.

Moreover, in standardized tests, results are expressed numerically and their actual value can be checked statistically. We can try out, revise, and improve our tests. We need not accept them on faith. I am convinced that one reason for much of the fire which has been directed against tests is the very fact that they lend themselves to critical, statistical studies whereas other methods of determining occupational fitness are less readily appraised. A correlation of 0.50 between test scores and job success indicates that the test is only 13 per cent more efficient than sheer chance in distinguishing successful and unsuccessful workers. However, many of our traditional methods of selection (rating of photographs, hand-writing, etc.) have been shown by investigators in the field to provide *no* better than chance relationship. A tool which is

13 per cent better than Lady Luck may thus become a powerful contributor to selection and guidance techniques. I should welcome with open arms a measure which was one-half of one per cent more efficient than chance in appraising such characteristics as sense of humor and patience—characteristics of undoubted vocational significance, but characteristics which we do not yet know how to define, much less isolate and measure. We must recognize the need for further research both in perfecting our present measuring sticks and in developing others. Let us also recognize that this approach to perfection is a painfully slow process, and that we are little likely to witness sensational advances in this generation. For this reason, let us use the mite which tests can offer at the present time.

I should like to mention a few illustrations of the use which we may make of tests today in practical employment and counseling situations.

Tests group themselves into two general classes. First, there are measures of inherent aptitude or capacity, measures of an individual's potentialities; and, secondly, there are tests of acquired proficiency including skill and knowledge. Of course, aptitude and proficiency overlap. Any given test probably measures a combination of innate and acquired qualities. When we use the term "proficiency tests," we refer to devices which appear to measure acquired skill and knowledge to a greater degree than native capacity.

The use of a proficiency test as a check against an individual's occupational experience provides our first illustration. Most job orders specify

definite limits of occupational experience. Most employers think in terms of an individual's work history rather than of his potential capacity. Nevertheless, the results of research already conducted have indicated that previous employment experience alone cannot be relied upon to provide an adequate measure of individual differences.

Consider such a tangible quality as typing ability. We are inclined to consider the girl with the most impressive experience to be the best qualified for a given opening. Little justification has been found, however, for believing that increase in experience is accompanied by increased typing skill. One investigation reports that applicants with less than a year of experience do almost as well as those who claim five years or more. Moreover, the Rochester Demonstration Office has found that the wane of typing skill through disuse during unemployment renders it dangerous for us to use experience as a criterion. What a person has done or says she has done tells us little of what she is able to do at the moment. The Minnesota Employment Stabilization Research Institute, as a result of intensive studies in the public employment office, found that a large number of experienced applicants fell below reasonable commercial standards, as measured by tests of typing skill. At the Adjustment Service we are constantly encountering clients with impressive typing experience whose actual ability tests below the marketable level.

The same findings obtain with respect to other skills and bodies of knowledge which we have learned how to measure objectively. The Minnesota

Institute administered a number of tests of trade knowledge to applicants for such jobs as welder, interior wireman, sheet-metal worker, etc., in the skilled trades division of the employment office. These tests are modifications of the Army Trade Tests. They reveal scores which classify an individual as novice, apprentice, journeyman, or expert with respect to the trade in question. One hundred and twenty-six applicants for nine of these trades who, from all other available information, were considered to be qualified, were given the tests. Of these, 26 were reclassified by the tests as novices or apprentices. Although the tests are not so accurate that these individuals could arbitrarily be considered unqualified, they do show that past experience is by no means a sure indicator of present ability.

We need many more proficiency examinations, but while these are being developed, we should make full use of the measures now available. We need sounder reasons for considering that an individual is equipped to do a given job than the mere fact that he has had three years of experience in comparable work.

In the second place, tests may be used to verify an individual's true educational background. There is an apparent tendency on the part of employers to demand more and more academic schooling as a prerequisite to most jobs, particularly those in white-collar fields. The reason for this is obvious. The employer believes that he is more likely to find mentally alert individuals in a group of high school graduates than among those with no more than elementary school-

ing. This is a rational expectation, but the facts indicate that these standards still leave the employer groping in the dark.

Several reliable measures of educational achievement are available. Using such tests, the Minnesota Employment Office found that 43 per cent of men and 55 per cent of women who were listed as high school graduates were below the educational achievement level for that group. On the other hand, many individuals who completed no more than seventh grade were found to have the academic background characteristic of high school graduates. High school diplomas, considered alone, constitute questionable data on which to predicate placement and guidance. We have not yet prepared statistics of our Adjustment Service clients, but impressions to date lead us to believe that comparable figures will be disclosed. Moreover, the same discrepancy may be observed with respect to higher education. One of our counselors presented in conference the other day the case of a young man holding a master's degree from a New York school of education, whose educational achievement and English vocabulary, as measured by tests, were no higher than those of a tenth grade student. As many in placement and guidance work have pointed out, we are interested not in the number of years of schooling an applicant has suffered, but rather in what profit he derived from them. Tests, in their present stage of development, are of concrete value in verifying an applicant's educational status.

Third, tests may be cautiously used, to inquire into an individual's natural capacity for work of a given nature.

Aptitudes are much more difficult than acquired abilities and skills to isolate and measure. But our feeling at the present time is that we must focus more attention than in the past on capacity. Many people have acquired experience in various occupations which are out of line with their true capacities, as nearly as we can tell from the measuring sticks which we use today. These individuals are likely to become marginal and unstable workers. Our aptitude tests are not accurate enough to say that a person *is* or *is not* capable of doing such and such work. Aptitude tests do spot paths for further exploration, however. For example, at the Adjustment Service, we occasionally find an individual who, despite six or seven years' experience in strictly clerical work, actually has held very few of his jobs for any length of time. In such instances we are likely to examine closely his aptitude tests scores. Let us suppose that such an individual is not merely below the median score for successful clerical workers, but below the average of people in general in terms of clerical aptitude. Although we do not accept this finding as absolute and final, the counselor may encourage the client to explore the possibility of engaging in some phase of office work which does not stress clerical sense alone; possibly in purchasing work, possibly in new business or other group contact activities. In some cases, a shift to an industrial environment suggests itself.

On the other hand, let us suppose that such an individual scores in the top 15 per cent of the adult white population with respect to clerical sense. Although this finding cannot

be accepted arbitrarily, it suggests that his lack of success in clerical work may be due to other factors. Perhaps he possesses personality traits which lead to unsatisfactory relationships with supervisors. Perhaps his intellectual capacity is so high as to induce restlessness in routine clerical activities. Perhaps the companies with which he has been connected have demanded work under too much pressure for one so constituted physically.

Moreover, clues to the aptitudes of individuals become of considerable importance when we encounter a youngster with little or no work experience. Without these clues, our guidance of a boy just out of school is likely to involve the tossing of a coin between mechanical and clerical work, let us say. We may uncover some pertinent information in his school record; for example, a picture of the types of courses in which he achieved the highest grades. We may obtain some help from his family history and from the boy's own expression of his interests. However, we need more, and our feeling is that our few aptitude tests, despite their present lack of perfection, do provide useful tools in counseling, selecting, and placing youth. "What *can* this client do?" is a question which confronts us at every step.

Fourth, aside from consideration of high or low test scores, the test records themselves are often useful aids to the interview, and provide suggestions for further investigation. Among the tests which may be used in this way are the well-known Strong Vocational Interest Blank, the Bernreuter Personality Inventory, and the Hall Attitude Inven-

tory. In addition to raw scores, the ways in which an individual responds to specific questions leveled at his interests, personality traits, and attitudes may provide provocative leads. For example, one section of the Strong Vocational Interest Blank asks an individual to check his preferences with respect to peculiarities of people: how does he feel toward gruff men, witty people, teetotalers, men who chew tobacco, people who always agree with you, etc. Occasionally we find a person whose dislikes are much more numerous than his likes in these particulars. This finding merits further probing. The client may be hampered by many prejudices, and thus may tend to make snap judgments about people on the basis of rather superficial first impressions. In such a case we should be disinclined to encourage work of a group contact nature. Counselors may unearth many valuable clues of this sort in studying their clients' reactions to individual test items. In addition, item analysis of test papers is useful in other than guidance situations. The Aetna Life Insurance Company and the Procter and Gamble Company, to cite two examples, use the Strong Blank and the Bernreuter Inventory in the interview.

Fifth, we are using tests to study how closely a client resembles successful workers in certain fields in terms of his general pattern of abilities and aptitudes. A few relatively clear pictures have been developed of the measurable traits (in terms of tests) possessed by well-adjusted successful workers in a few occupations, such as clerical fields, department store sales, life insurance sales, nursing, etc. These

"occupational ability patterns" can be used to study the degree of resemblance between a client's configuration of characteristics and those possessed by successful individuals in different fields. Unfortunately, there are as yet relatively few of these occupational ability patterns available, and these are based on a limited number of cases. Research of national scope is needed. Dr. M. R. Trabue, who is responsible for many of the patterns developed to date, says: "The ability patterns for some occupations are very much alike, while those for other occupations are decidedly different. It seems probable that there are definite families of occupations, and that one occupation in the family calls for almost exactly the same patterns of ability as any other, although the specific knowledge or skill required in the two occupations may be quite different. Perhaps a reorganization of our entire scheme for classifying occupations might profitably be based upon such tested ability, personality, and interest patterns."

The potentialities for research in this field are unlimited. In the meantime, we are using the few patterns already developed to help an individual select an occupational field in which typical, successful workers possess characteristics similar to his own.

Tests do not provide a short-cut. There can be no formula in counseling and placement work. However, the experience of many in this field leads us to believe that we should not overlook the smallest technical offering in our guidance of unemployed and otherwise maladjusted persons. We are constantly encountering cases where the use of every facility at our disposal—

tests; personal, work, and educational histories; physical and psychiatric examinations; job analyses; studies of employment trends, etc.—leads to nothing. The counselor is thrown back upon his own resources, and must rely upon his own ingenuity and imagination in working out a program with his client—a program which is often no more than a shot in the dark. We are convinced that without the few diagnostic measures which we use, the counselor would be forced to grope, to draw upon his own fertility of hunches, much more often.

However, a note of caution, a plea for scientific, skeptical, cautious approach to the use of tests cannot be too strong. Tests are of no value unless used under standard conditions. The methods employed in the use of tests cannot be divorced from the tests themselves, and an appreciation of testing standards must accompany their use. For example, tests should be used only under controlled laboratory conditions. This obvious standard is the one most frequently violated. Tests have been given in a poorly lighted corner of the employment office in the midst of other activities. They have been given in tiny offices with glass partitions for walls, with the result that every movement in adjoining rooms served to distract the examinees. Test results are found to be reliable only when external conditions are controlled. I shall not forget Paul de Kruif's gripping account of how old Dr. Semmelweis reduced the mortality rate in the maternity ward of the Vienna General Hospital in 1846 merely by forcing his assistants and students to wash their hands in

chlorine water after each examination. Advancement in psychological testing may depend upon our observation of what may seem to be equally incidental minutiae.

Tests must be administered by an examiner trained in psychometric methods. This does not mean a trained psychologist, unless the latter has had intensive training in testing work. The administrator of tests should be a specialist in one field of psychology, just as an X-ray technician specializes in a single field of medicine. Some of the worst as well as some of the best testing has been done in the past by psychologists.

Moreover, the test administrator should be engaged in full-time testing work. Not even an experienced examiner can do a finished testing job when it is a part-time activity, incidental to other duties. In clinical work a competent psychologist may advantageously handle both testing and interviewing, but in a practical placement situation tests should not be administered by the employment interviewer. Testing and the personal interview provide two distinct classes of information concerning an applicant, and independent techniques should be employed in obtaining each. The interviewer who has tested an examinee cannot be expected to form an impartial judgment of the information obtained from personal interview with the same individual.

In a practical test situation considerable stress must be laid on establishing rapport with each individual tested. It is difficult for one unfamiliar with tests to appreciate the importance of arousing the examinee's interest and

securing his confidence; and yet it is during these introductory moments that the examiner ensures or precludes reliable results. Data obtained from tense, uncooperative, indifferent examinees are of no value. The client or applicant must be brought to a receptive mood, anxious to do his best on the tests but without fear of the results. This is often no easy task. Many men and women stampede mentally at the thought of taking tests and resent all attempts to probe their characteristics. This is true even of those who are rational thinkers in other respects. In college testing, for example, there are always a few of the most brilliant students who have an unreasonable dread of tests, although their scholastic records should give them confidence in their own intellectual calibre. It is worse than useless to test such individuals without, as far as possible, removing their mistrust. The slightest trepidation, or lack of confidence invalidates the results.

In much personnel testing in the past, a single test, or at the most two or three, have been used for each individual. In measuring aptitudes of potential bookkeepers, for example, little attempt has been made to test for qualities which do not appear to be needed in bookkeeping work. Acceptance or rejection has been made in terms of specific positions. Aside from the fact that an organization may in this way overlook valuable timber for other positions, there is considerable danger in placing an examinee in a job whose standards he *does* satisfy without learning more of his total range of capacity. An obvious illustration is the experience of many organizations

which have found that much of their turnover in routine departments has been due to placing high-grade men in low-grade positions. Each individual should be tested in a variety of respects, if he is to be tested at all. Aside from the standpoint of industry, the use of one or two tests alone is harmful from the individual's point of view. Assuming an unselected group of examinees, only 50 per cent will do well; that is, score above average in a single test. The other 50 per cent will do poorly and become discouraged at their lack of success. Clinical testing experience indicates that most individuals have at least one characteristic in which they are above average, and it should be the responsibility of a testing department to administer enough tests to uncover at least one trait with respect to which the individual can be encouraged. Testing must be stimulating.

Another concomitant of good testing is constant checking of the reliability and validity of the measures used. An organization which is doing anything with tests must critically appraise each of them from time to time. Since we need not, we should not accept tests on faith alone.

Finally, as I have already intimated, the interpretation of test results must be tempered and cautious. It has been said frequently that neither a test nor a test score has any value in itself. The test score is merely a fact, the valuable features of which lie in the interpretation. Most of us in the field believe that meticulous control of conditions by a trained examiner using carefully calibrated tests should result in relatively reliable and valid infor-

mation about some of an individual's characteristics. Nevertheless, we recognize that this information is only *relatively* reliable and *relatively* valid. An ideal battery of tests can provide no more than an approximation of the extent to which an individual satisfies certain job requirements. The data so obtained should be used to supplement rather than to supplant personal interviews, application and other record blanks, physical examinations, investigations of references, and other techniques.

Test standards or norms have been developed from group data. The success of groups of individuals, rather than the success of individuals, is what tests can predict. This is true not only of psychology. The biologist can predict that if a dominant characteristic (for example, red flowers) is crossed with a recessive characteristic (white flowers), all of the first generation of hybrids will be red. When these hybrids interbreed, one-fourth of their children will be truly recessive (white-flowered). The biologist has no way of predicting whether a given grandchild will be white-flowered. All that he can say is that twenty-five per cent of all the grand children will be white-flowered.

In the same way, the psychometrician predicts the success of groups. In using a certain test of finger dexterity, for example, he finds that of every 100 girls who score "A" in the test, approximately 70 will eventually become successful in clock assembling work; that about 30 of every 100 girls who score "B" will become successful in the same work; that 10 girls of every 100 scoring "C" will also earn their living in this

work; and that in the lowest group, "D," 2 of every 100 girls will do successful work in clock assembling. He cannot predict the success or failure of any given girl. He cannot state justifiably that this girl will be successful in assembling work or that another will fail to qualify during her apprenticeship. All that he can do is indicate her relative chances of success, and this indication must be tempered with judgment.

Psychological tests are not precision instruments. Although the approach must be scientific, the interpretation of results is still more of an art than a technique which may be learned in three easy lessons. Test results are useful only in the hands of individuals trained to use them judiciously.

An organization which observes these conditions will find that testing is not an inexpensive indulgence. Experience of the Minnesota Employment Office shows that the cost of using tests for diagnostic purposes under actual employment office conditions was \$2.95 per case. Indications are that our own figure at the Adjustment Service will be of the same magnitude, perhaps approaching \$2.50. This cost, while not exorbitant when thought of as an investment which may have some bearing on an individual's whole life, is nevertheless rather large in terms of any one organization's budget. Moreover, these figures include merely the cost of materials, administration, and scoring. It is difficult at the moment to estimate the cost of concomitant research and the time of psychologists needed to check the interpretation of results. For this reason, I believe that there are at the moment few organizations in a position to under-

take a testing program on a sound, thoroughgoing basis. It seems to me that practical use of tests in the present-day situation demands that there be available in each community a sizable organization to which various community activities—welfare agencies, employment centers, educational institutions, and the like—may send individuals for technical diagnostic service. This, of course, is the present status of the Adjustment Service in the Metropolitan community. Whether or not the Adjustment Service in its present form should be made a permanent part of the community, we feel strongly that some such organization should be one of the clinical resources of a community set-up. I dare not venture to suggest how such an agency should be financed and what its formal relationships should be to existing agencies, including the State Employment Service. Perhaps there should be five such diagnostic centers, one for each borough.

At any rate, while I believe I recognize fully the limitations of tests and the harm which may result from their improper application, I am enthusiastic about their aid to employment and counseling, meagre as it is. Individuals do differ and we are forced in a practical counseling and placement situation to appraise these differences in some way. Our traditional methods are not so accurate that we can afford to ignore the most infinitesimal contribution in the direction of objectifying our appraisals. Tests have progressed one step toward the goal of objectification, and we should use the modicum of information with which they provide us.

Learning to Spin

BY H. KIRIHARA, *Kurasiki, Japan*

Training of factory operatives during the later stages of learning is found by Dr. Kirihara to be quite as important as initial instruction in the elementary operation, to which most instruction in factories is limited.

NUMEROUS investigations of learning have been made in laboratories, but very little strict research has been done in actual factory work. I therefore made observations of individual learning curves over a period of about 150 days in a Japanese spinning mill. The number of workers was about 120, between the ages of 14 and 16: the period of greatest proficiency for learning spinning work in the reeling operation. I also observed extensively the learning curves of about 300 girls who entered the works at another season of the year.

The results were as follows:

(1) There are four types of learning curves, viz: (a) Convex ascending; (b) Concave ascending; (c) Straight ascending; (d) At first ascending, then flat, and again ascending.

Type (a) is the most frequent, representing about 60 per cent of the total, followed by type (b) of which there are approximately 20 per cent; while the other two types include about 10 per cent each. These averages are common to different groups.

(2) In the initial stage, all learning curves are ascending-convex. Typically, the initial daily output was one or

two reels. After 30 days there comes a plateau at the height of 35 or 45 reels daily, on an average.

(3) For almost half of the operators, there comes a sudden increase, about 80 or 100 days afterwards. These operators are generally higher in general intelligence by 10 or 15 per cent than the others, whose learning curves do not show this final upturn.

(4) Unfavorable external conditions have a disturbing influence on the learning processes. I found the most disturbing influences to be night work and unsuitable temperature conditions.

(5) Time studies on the analyzed movements showed that in the beginning the workers learned the elementary operations separately; then the systematizing of them. Comparing the results, the principal difference between the more skillful and less skillful operators is, that in the case of the former, the time elapsing *between* elementary movements is extremely small, the time taken for the elementary movements themselves being the same for both skillful and less skilled workers.

In conclusion, I am of the opinion that in factory work, such as the reel-

ing operation in a spinning mill, the learning curve generally takes the form of an ascending convex curve, if the external conditions are satisfactory; and also that the learning proceeds from elementary operations to the synthesis of these operations.

It follows that systematic training is most important during the period of this synthesizing process, although most factories, unfortunately, concentrate their training only on the earlier stages when the workers are learning the elementary operations.

Personality Analysis and Improvement

BY HARRIET BABCOCK, *School of Commerce, New York University*

Newman L. Hoopingarner's methods of analyzing and building personality are here described. His fundamental premise is that personality traits result from the interplay of all one's abilities in relation to each other, to the environment, and to the ultimate goal.

PRACTICAL work in personality diagnosis and advice has too long lacked clear underlying principles. It has been at about the same stage of development as intelligence testing before the time of Binet, when interest was centered in abnormal conditions, or attempts were made to study separately such processes as attention and memory, while the fact was ignored that these processes can occur only in relation to the data to be attended to and remembered, and that these in turn are limited by individual differences in both sensory functions and level of abstract intelligence. And in personality studies, workers have been concerned with abnormal traits, or else have tried to abstract and measure some one phase of the whole personality, such as introversion or submission, as if one phase could exist alone.

One factor which has definitely hampered general progress in the study of personality has been a tacit assumption that the same statistical procedure is as sufficient for individual work as for group work. The concept of norms was a step forward in our understanding of group and indi-

vidual differences; but it has become increasingly evident that emphasis must be put upon trying to understand the exceptions to the norms. Personality differences depend upon whether conditions permit traits to develop to extreme degrees or tend to inhibit them. The same or equivalent abilities, for example, may result in aggressiveness or meekness, according to whether one is superior to his group, how he is regarded by his group, and whether he can easily and creditably do the things his ambition activates. It is becoming obvious that it is of little practical value to any individual seeking helpful advice, to tell him that he does or does not offer a striking exception to expectations made known by complex statistical manipulations. And yet some such statement has often been the only contribution which a consultant could conscientiously offer.

Another factor which has hampered progress is that, while we have devised tests to measure various personality traits, we have not always considered the underlying abilities and characteristics without which there is no personality. We have tended to overlook the fact that personality is a result of

the relations and interrelations between a person's physical and mental abilities, his ambitions, his training and experience, as well as his reactions to the abilities and personalities of his associates. The new science must not only study traits, but also the underlying abilities and ambitions whose relations help produce the traits. It is not enough to know where a person stands in the normal distribution of traits; we must also know whether he has enough or too much of a trait for the field in which he wants to succeed. Personality advice of any value must be related both to a person's ability and to his ultimate goal, no matter how hazy and inexact that goal may be.

The practical work here described has made strides in overcoming these and other handicaps, and has pointed the way to a more workable concept of personality.

Mr. Hoopingarner's belief is that the chief justification for personality study lies in developing methods by which individuals can actually be helped to make the most of themselves. This is a definite departure from the fatalistic assumption that if a person has the facts or the technique needed in a particular line of work, he will make good "if it be in him to make good." His method of procedure assumes that no personality study can be adequate unless it includes data about the subject's capacities and all environmental influences, including his ultimate goal.

The general method of analysis used in this work was begun about fifteen years ago. Studies made under the auspices of the Carnegie Foundation

had brought out the fact that even in such a technical line as engineering, success was due more to personal qualities of the individual than to his technical knowledge and skill. Taking this study as a cue, Professor Hoopingarner came to the conclusion that success in practically every field of business and the professions, is due about "15 per cent to technical knowledge of the particular field and about 85 per cent to those personal qualities which have to do with successful dealing with people."

Gradually investigation made apparent a glaring gap between college training and successful performance in work. Methods for training in this 85 per cent became an imperative need and, as Mr. Hoopingarner saw it, the chief problem of practical psychology. His major efforts were turned toward devising means for giving individuals a better understanding of how to deal effectively with people through studying and developing their own personal qualities. This resulted in the publication of his "Personality and Business Ability Analysis,"¹ which now forms a nucleus for his work with New York University students as well as his business consulting work.

This analysis assumes that everyone has personality, which can be evaluated with some degree of accuracy. It considers that personality is not a final matter, but undergoes continuous adjustment and continuous improvement or deterioration; and that in controlling its development, if we

¹ Newman L. Hoopingarner, *Personality and Business Ability Analysis*. New York: McGraw-Hill.

cannot add to one's innate capacities, we can at least change habits of response and modify the goal to one within possible reach.

It recognizes that the majority of persons seeking advice are neither abnormal or pathological. It carefully avoids the suggestion of anything pathological. In a physical examination such a test as the spinal fluid test is not given unless the regular examination indicates necessity for it; so in a personality inventory the necessity for supplementary tests to show possible abnormal traits readily becomes apparent from responses to the usual questions.

The approach recognizes that advisory methods based on tests given by a third person fail to stimulate subjects so as to make them mentally receptive to advice. For this reason the examination is self-rating and requires much thought on the part of the subjects. At the same time it gives them an idea of their weaker traits.

The method definitely differentiates between personality improvement and vocational fitness, the emphasis being put on finding out how personal qualities can be improved so the individual can make effective use of what he has. He is not merely analyzed as to the present status of his personality, but is advised about how to strengthen his weak points and capitalize his strong points. At the same time an attempt is made to aid him to decide in what general type of work he will probably find his greatest success and satisfaction.

Probably one of Professor Hoopin-garner's chief contributions to the study of personality is his recognition

that analysis must always be made in the light of the underlying abilities whose relations with each other and with the environment, help produce the personality traits which are being studied. He recognizes that a sound working basis "must take into consideration all of the major factors in human ability, that is, one's physique, his mental alertness, his aptitudes, skills and temperament,—factors which are present in everybody, which vary with each individual, which are necessary in varying degrees to the performance of every type of work and which can be improved; and that *unless all these factors are taken into consideration at any one time the picture of the individual's ability is incomplete and the basis for improvement is inadequate.*"

Not only tests of mental ability, but also surveys of experience and skills are incorporated in his analysis and diagnosis procedure.

The underlying basis for "Personality and Business Ability Analysis," is an evaluation of each of these factors: physique, mental alertness, skill, aptitudes, temperament.

Twelve personality traits are studied, as follows:

(1) *Impressiveness*—"the combination of personal and physical qualities which influence favorably those with whom one comes into contact. This includes physique, energy, personal appearance, manner and presence." Thirty questions, most of them indicating behavior patterns, constitute the test for this trait.

(2) *Initiative*—"a combination of originality, determination, perseverance, and enthusiasm. It means hav-

ing ideas and getting things done." Twenty-four questions are used in this test.

(3) *Thoroughness*—"involving accuracy and dependability in performing any task; not taking things for granted; and reliability in the assumption of any duty." This is judged by two timed tests which require thoroughness, and a question test about habits of thoroughness.

(4) *Observation*—"involving both memory and perception. It is the ability to see and to remember details of a picture which is observed for a definite length of time."

(5) *Concentration*—"the ability to disregard other problems and to focus attention on the particular task at hand." This is tested by two timed tests which are easy to understand, but require close attention.

(6) *Constructive Imagination*—"the ability to apply present knowledge and experience toward the solution of new problems. It is the ability to see the relationship of what you already know to new situations and is the basis of originality." This test demands recall and use of data already known, beside definite statement of the subject's goal and his plans to reach it.

(7) *Decision*—"involving quickness of comprehension, the ability to think through a situation and to arrive at a conclusion, and the ability to put a problem aside and to go on to the next, once a line of action has been decided upon." In this test there are questions about habits of decision; a time limit is set on matching proverbs which have similar meanings. While such underlying meaning can be

grasped before college age, the ability to grasp it promptly is indicative of ability to use one's ideas promptly and efficiently in coming to a decision.

(8) *Adaptability*—"the inherent ability to adapt oneself to new problems easily and quickly, which involves mental alertness, speed of thinking, and facility in changing mental set." This is measured by short timed tests which require abstract intelligence and questions about habits which are associated with ability to adapt well. Both social and mental adaptability are given consideration.

(9) *Leadership*—"the ability to get others to do willingly what you want them to do, to get results from men rather than from tools and machinery" is measured by questions which furnish indications of mastery, control, fairness, and tact.

(10) *Organizing Ability*—"the ability to see the elements of a problem and to keep them in their proper relationship; and to be resourceful in planning methods for their solution." This is measured by timed tests which require ability to analyze and synthesize data.

(11) *Expression*—"the ability to think clearly and to convey one's ideas to others—to know and let others know you know"—is measured by an antonym-synonym test and by questions about ease of expression, tact in arguments, etc.

(12) *Knowledge*—"knowing facts and having ability to use them, that is, to recall them when wanted"—is measured by two tests; one on general knowledge and the other requiring knowledge of business.

Following the survey of abilities and personality traits, there is a section dealing with the subject's life-history, training, experience, vocational tendencies and ultimate goal.

The general procedure being followed in Mr. Hoopingarner's course at New York University is as follows:

The individual who is to receive advice takes about two hours to complete the Personality Analysis, scoring the various tests himself, and from the results making a profile which gives him an indication of his own best and weakest traits.

After this the analysis book goes to an assisting psychologist, who after interpreting and summarizing the results in the light of the individual's potential and actual goal, prepares constructive suggestions showing how the student can capitalize abilities by strengthening weak points and improving poor habits which have been brought to light. The summary also attempts to point out in which of four general types of personality the student belongs.

This report goes to an interviewer, who is also psychologically trained and who is familiar with business and professional demands and opportunities. He is thus competent to interpret and supplement, in a private interview with the student, the analyst's advice.

Regular class lectures furnish a psychological background enabling the student to understand how to effect recommended changes.

Class papers, especially planned to make the students think through their particular problems, are also requirements of the course.

Supplementary to all this is a psychological laboratory in which other special tests are given as needed, and where individual voice records and moving pictures are made so that the student may see for himself any peculiarities or mannerisms which unfavorably affect his dealings with other persons.

No part of the procedure is allowed to become mechanical. Each student is considered individually. It is recognized that apparently equivalent scores are not necessarily equal, and that though the examination is self-analyzing it cannot be self-interpreting. The psychologist who summarizes the student's analysis has to consider what factors contribute to making a trait seem high or low—whether it is raised or lowered by good concentration and relatively poor understanding; whether differences in age are a factor, since youth with its speed and over-confidence tends to raise some scores, while age through failing confidence and lessening speed tends to lower them. Each separate answer in the questionnaires must be considered on its own merits, for it either tells of a good habit which is an asset or a poor one which one should have help in changing. Weakness in mental functioning is detected by comparing with the norms the tests which particularly depend upon clear thinking and ability to concentrate. The parts which show abstract intelligence must also be considered in relation to the person's vocational goal and the advice to be given. There are many chances for error in judgment on the part of the psychologist. Few psychologists can overcome wrong

impressions due to smutchy work, bad grammar, or lack of confidence about one's own ability, although these may be due merely to lack of early education. On the other hand, neatness and speed united with confidence tend to suggest great native ability—an impression which is occasionally wrong.

There is a positive correlation of $+.38$ between intelligence and the total score on the Hoopingartner personality analysis. This is the basis for our impression that if the personality rating is high the ability is also high. But the low correlation indi-

consistent with different groups, and indicates a slight tendency of persons of superior intelligence to under-rate themselves in personality traits. In fact, the *average* college student tends to give himself a higher rating than does the superior one.

When we compare scores of college students of lowest, medium, and highest intelligence, as measured by the Otis Group Examination, these tendencies show us the differences between the average scores of these groups. This is shown in table 1.

The same total personality score may mean only fair ability with much

TABLE 1
Average test scores of persons on three intelligence levels

	TOTAL PERSON- ALITY	CONFI- DENCE	DOUBT	INFERIOR- ITY	CONCEN- TRATION	ABSTRACT INTELLI- GENCE
Lowest intelligence.....	85.1	105	37	21	99	59.9
Medium intelligence.....	93.7	111	40	17	108	66.0
Highest intelligence.....	94.5	86	66	15	105	80.5

"Total" refers to the total score for the twelve traits in the personality analysis: "confidence," "doubt," and "inferiority" indicate the student's certainty as to the possession of various traits as shown in the question tests.

cates also that scores alone are not reliable bases for inference about individuals.

Further statistical study shows that there is practically no relation between a person's intelligence and his confidence that he possesses desirable traits, as shown in the tests consisting partly or entirely of questions. This correlation coefficient is $-.09$, indicating that the answers are probably due to experiences which have tended to raise or lower confidence.

The correlation between doubt and intelligence ($+.21$) is more nearly substantial. Though this is low, it is

self-confidence, or superior ability with a feeling of inferiority due to experience and environmental conditions, or any of numerous combinations. Exceedingly high or exceedingly low scores are nearly always definite; the one showing a feeling of inferiority based on poor ability and the other showing a feeling of confidence based on real ability.

It is only by knowing all the facts in relation to each other that scores can be of any practical significance.

This practical work in personality analysis and improvement, while still experimental, has taken a vital place

in the educational program of normal adults, being given to hundreds of business and professional men and women of from eighteen to sixty years of age.

The method has been tried out over a period of years and has proved of value in determining whether persons can succeed vocationally in different kinds of work, and what improvements are needed to assure success and professional growth for those already oriented vocationally. A study was made in a sales organization, in which the criterion of validity was the actual success of the individuals in their work when followed up six months after the examination. Predictions of sales supervisors, with their greater opportunity for observation, were found to be from 49 to 50 per cent correct—not greater than chance; while the opinions based on the Hoopingarner analysis, which considered past experience, personality traits and habits, and native ability in relation to the work to be done, predicted 75 per cent of the successes and 59 per cent of the failures. When success was predicted, probable weak points were pointed out and constructive advice was given about how to deal with them.

In another study, fifteen new salesmen were selected in the usual way; five of them through advertisements, and ten of them because of their own selling ability. These were college men thirty or more years old who had had experience. It was thought by the employers that each one had more than a chance of making good. Each of the fifteen was given the Hoopingarner personality analysis, the results of which were reported under five headings as follows:

1. General aptitude for the particular type of salesmanship
2. Ability to grasp the technical features
3. Probable temperamental reactions
4. Receptiveness to leadership and supervision
5. Probable difficulties as shown in the five factors of ability

On the basis of the analysis, it was predicted that five of them would fail because of unfitness for the particular kind of work. Four failed utterly, though they had had standard college education and one had given every promise of success from surface indications. The failure of another was due to temperamental difficulties. Of the favorable prognoses, the report based on the analysis was accurate about the difficulties the employees might encounter, and the statements made on this score proved helpful to the employer in training them. Six became successful salesmen; two became supervisors, and one became consultant to a trust company.

Such results could not be obtained by everyone, however. The whole procedure requires familiarity with the examination and understanding the purpose of every test and every sub-test. Consequently, while calling attention to the analysis as the type which will prove of value in practical work, it is also necessary to call attention to the need for careful training in the use of such an examination.

To summarize the ideas which form the basis of this personality examination: personality traits result from the interplay of all one's abilities in relation to each other, to the environment, and to the ultimate goal. Unless

all of the five factors in ability are considered at any one time the survey of a personality is incomplete, and the basis for advice with regard to possible achievement is inadequate. Everyone has in varying degrees the abilities which go to make up personality. The degree to which some traits or combinations of traits exceed others results in more or less clearly defined types of personality which correspond more or less closely to the main classifications of business activity.

The method of analysis tends to make the individual think his own

problem through for himself. By its self-rating and self-scoring devices it obviates the effects of too much suggestion from others. The final result is the consideration of a unified personality, instead of emphasis on separate traits as if they were unrelated to the whole. Its recognition of the need of an entirely new approach to the subject, and its application of psychological methods, make this pioneer work one with which psychologists who are doing practical work in the field of personality cannot afford to be unfamiliar.

Intelligence of Commercial College Students

BY RICHARD J. TRIPLETT, *University of Denver*

Is it true that the cream of high school graduates goes to liberal arts and technical colleges, while the duller students go to commercial schools? "No," says Mr. Triplett, after conducting tests.

HOW intelligent are commercial school students? Do they tend to be intellectually inferior to the boys and girls who go on to liberal arts and technical colleges? In order to answer these questions, we administered standard intelligence tests to students of a typical commercial college.

The school selected for study has a normal enrollment of over five hundred high school graduates drawn from the Rocky Mountain region. It is an established institution offering courses in commercial training from eight to eighteen months in length. There are other schools in the region which offer shorter, less complete courses; and still others which offer longer, more complete courses. Students of this school, therefore, seemed an ideal group to investigate.

The Thurstone Psychological Examination (1930) was given first to a group of two hundred. Later the Otis Self-Administering Higher Examination, was given to a group of four hundred.

The median score of business college students on the Thurstone Psychological Examinations is 130, or eight points below the median score for 36,479

college students measured by the same test.¹ The fiftieth percentile score for the commercial group is approximately equal to the forty-eighth for the college group; the score for the twenty-fifth in the commercial equals that for the twenty-second of the college group; and the score for the seventy-fifth percentile is the same in both groups. Forty-five per cent of the commercial group equaled or exceeded the median of the college group. These 36,479 college students represented 137 colleges, and the median scores for the students in sixty of these colleges were below the median for this commercial group, while the students in seventy-seven colleges showed higher medians.

Unfortunately, there were only sixty-eight boys in the commercial group. This gives rise to a high probable error. It should be noted, however, that their median is 150, or twelve points above the college median. It should also be noted that in the following groups the scores for the boys are always higher, and this would tempt one to think that advanced commercial

¹ From the Report of the 1930 Psychological Examination, *The Educational Record*, April, 1931.

education may attract a higher type of boy than girl.

The group of 400 tested by the Otis Self-Administering Higher Examination showed similar results (table 2). The median score of fifty-one for the above group is two points below the score of fifty-three quoted by Otis in his manual as the median for 2,516 college students from twenty-one colleges.

mercial; the college fiftieth nearly equals the commercial fifty-fifth, and the college seventy-fifth equals the commercial eighty-fifth. The scores for the twenty-fifth and fiftieth percentiles for the commercial boys, however, are the same as for the college group. The score for the seventy-fifth percentile for the college group equals the seventy-eighth for the commercial

TABLE 1

Scores of commercial college students on the Thurstone Psychological Examination
(From Class 1930-31)

	200 CASES	68 BOYS	132 GIRLS
Mean.....	133.8 \pm 2.14	143.4 \pm 4.32	128.8 \pm 2.61
Median.....	130.0	150.0	121.3
Q ₁	87.9	99.0	84.4
Q ₃	175.5	188.0	166.5
Standard Deviation.....	44.8	53.1	44.4

TABLE 2

Scores of commercial college students on the Otis Self-Administering Higher Examination
(From Class 1932-33)

	400 CASES	125 BOYS	275 GIRLS
Mean.....	50.93 \pm .35	53.02 \pm .60	49.97 \pm .42
Median.....	51.28	53.15	50.44
Q ₁	43.42	46.01	42.36
Q ₃	58.57	60.89	57.53
Standard Deviation.....	10.31	9.88	10.35

The girls of the commercial group were three points below this college group. I may also add that the same medians were obtained from a small group of University of Denver Commerce students (102)—fifty for the girls and fifty-three for the boys.

Comparing percentiles, one finds that the score for the twenty-fifth percentile in the college group is about equal to the thirty-third for the com-

boy. Forty-four per cent of the commercial students equaled or exceeded the median for the college group.

On the basis of these tests it may be concluded that the students in this apparently typical commercial college are not significantly inferior intellectually to the general run of liberal arts college students. Among commercial students, boys appear to be slightly brighter, on the whole, than girls.

Revised Beta Examination

By C. E. KELLOGG AND N. W. MORTON, *McGill University*¹

This revision of Army Beta Examination was prepared particularly for use in a study of the unemployed, which will be described in a forthcoming issue of THE PERSONNEL JOURNAL.

The revision of Army Beta Examination described here eliminates the pantomime method of giving directions, and substitutes a scheme of printed exercises preceding each of the six tests. This change results in a decrease in the number of zero scores, owing to better understanding of the directions. In addition, more nearly normal distributions of sub-test scores are secured through the introduction of new test material, better gradation of test items, improvement of the range of difficulty of the tests, and alteration of time limits. The reliability of the entire test is .987. It correlates highly, for literate subjects, with verbal tests of intelligence, and satisfies Spearman's criterion for 'G.' Tentative letter-grades, and age- and grade-norms for school-children are given.

BETA Examination was developed in 1917-18 by the staff of the Division of Psychology, Office of the Surgeon General, as a group test of mental alertness for non-English-speaking and illiterate recruits.² In its final form it comprised seven sub-tests of a distinctly non-verbal character, the directions for which were given by demonstrators in pantomime fashion with the aid of a

blackboard. It was administered to all men eliminated from Alpha Examination because of relative illiteracy, and was intended also for those falling below the grade of C-.

The test in its army form possessed certain inherent disadvantages. The pantomime method of demonstration was not entirely satisfactory, as there was great difficulty in "getting the idea across."³ Analysis of results frequently showed a high percentage of zero scores on certain tests, which was considered an indication of failure to make the subject understand what was wanted of him. Moreover, the study of certain typical groups of tested recruits revealed the distribution of sub-test scores to be in some cases most unsatisfactory, owing to

¹ The authors wish to record their indebtedness and thanks to the Social Research Council of McGill University for financial assistance in the development of the revision of this test, and to many individuals who forwarded its progress through the contribution of their personal assistance or through the provision of facilities for administering the test.

² Yerkes, R. M. Psychological Examining in the United States Army. *Mem. Nat. Acad. Sci.*, Vol. 15, 1921.

³ Ibid. p. 379.

the piling up of cases at either end or at both ends of the distribution.⁴ The test as a whole, however, proved to be of sufficient value to justify its use with selected classes of recruits. Following cessation of military activities, its principle—the use of non-verbal material for test content—was employed in the development of several scales for school-children of the primary grades.⁵

A preliminary form of the present revision was developed by the senior author in 1920 with the intention of eliminating the principal disadvantages of the Army form. The pantomime method of demonstration was replaced by a system of introductory exercises⁶ preceding each of the sub-tests. It was arranged that these exercises should fall on odd-numbered pages of the test booklet, while the tests proper occupy the even-numbered pages. In content the exercises are similar to the tests, but the examples which they contain are, of course, not identical with any of the test items.

On commencing the examination, the subject's attention is directed to the exercise preceding Test 1, and this exercise he completes to the satisfaction of the examiner. Directions are

printed briefly, but are repeated orally by the examiner and his assistants who, if the candidates do not speak English or exhibit lack of understanding, may show by individual demonstration what is expected. To facilitate the explanation, a few of the items included in the exercise are properly completed. Following completion of the exercise, candidates are directed to turn over the page to the accompanying test, which is then attempted in the ordinary manner without assistance. For each sub-test there is a definite time-limit, varying from 1½ to 4 minutes.

The chief advantage of a practice exercise prior to each test lies in the opportunity afforded for determining beforehand whether the subject fully understands the instructions. If he does not understand, it is possible to repeat the instructions and to continue the demonstration until he grasps the procedure unless he is absolutely incapable of comprehending it.

In addition to this modification, a number of changes were made in the tests themselves. Test 2 (Cube counting) of Army Beta was eliminated, because of unsatisfactory distribution of scores, and the confusion due to the reversible perspective illusion. Test 3 (X-O series) has also been discarded. In its original form, it gave an extremely unsatisfactory distribution, though it was hoped that if the test were extended, it might prove satisfactory. Accordingly, the preliminary form of the revision included a modification of Test 3 prepared by Dr. H. C. Bingham. This was further modified by Dr. A. S. Otis for trial at Camp Grant in 1921, but was not satisfactory. In

⁴ Ibid. p. 627-628. Sub-test score distributions are shown here for an experimental group (Group X) of 1047 cases, with a mean total score of 63.1, and a S.D. of 25.2. The mean and S.D. of this distribution were determined by the authors from the distribution of grouped scores given in the text (as on p. 643).

⁵ Cf. the Otis Primary Examination, the Pintner Non-Language Mental Test, and the Rhode Island Intelligence Test.

⁶ This scheme was drawn from Haggerty's Virginia survey tests, since published as Delta 1 and 2.

the final revision there has been substituted a test of "common-sense picture discrimination." Test 1 was left untouched in form, while in Test 4 (Digit-symbol) the procedure was reversed, the subject writing numbers rather than symbols. Test 5 (Number-checking) was altered to include

verse of the system in Army Beta. Items were replaced and their positions changed in Tests 6 and 7, and the latter was considerably lengthened. In Test 7, moreover, the pieces now lie on the left of the square, instead of on the right. This change was made to promote greater freedom of vision, by pre-

TABLE 1
Time limits, directions, scoring instructions, etc.

SUB-TEST	TIME LIMIT	CONTENT	DIRECTIONS TO SUBJECT	SCORING INSTRUCTIONS	MAXIMUM SCORE
	<i>minutes</i>				
1	1½	Maze	'Mark the shortest path from each arrow on the left to the opposite arrow at the right, but do not cross any of the lines'	One point for each half-maze correct. (No corrections allowed)	10
2	2	Digit-symbol	'Put the right number under every mark'	Divide number correct by three	30
3	3	Common-sense picture discrimination	'In each square mark the thing that is wrong'	One point for each item correctly marked	20
4	4	Form board	'Mark each square to show how the pieces at its left will fit into it'	One point for each square correctly marked	18
5	2½	Picture completion	'In each picture draw what is left out. Work fast'	One point for each picture correctly marked—artistic accuracy not expected	20
6	2	Number checking	'Look at each pair of drawings or numbers, and make a mark on the dotted line if they are not alike'	Subtract the number of wrong responses from the number of correct responses	25
Perfect Score.....					123

pictures and symbols as well as numbers, in order to make the subject's introduction to the test slightly easier, and to render the test less difficult at the lower end. The procedure of this sub-test was also modified so that the candidate marks with a cross the pairs with unlike members: exactly the re-
venting the subject's hand from obscuring his view of the pieces while marking the square. The time limits of all tests except Test 4 (Digit-symbol) were altered. Tests 3, 4, 5 and 6 of the present revision (table 1) are unweighted as to score, while one point is given in Test 1 (Maze) for each half-maze

completed,⁷ and in Test 2 (Digit-symbol) the number of correct responses is divided by three, as in Army Beta.

Distributions of single sub-test scores for a group of unemployed men with a mean total score of 64.3 and a standard deviation of 17.4 (fig. 1) are relatively satisfactory when compared with distributions of similar sub-test scores for Army Beta (Experimental Group X). Not only does the distri-

sophomores certain of the sub-test score distributions show a negative skew, particularly in the case of Tests 2 (Digit-symbol), 5 (Pictorial completion) and 6 (Number-checking) (fig. 2). As with Army Beta, it is evident that for subjects of this level of ability the test in its present form and length tends to fall short in range of difficulty of items, and is much better adapted for less highly selected groups.

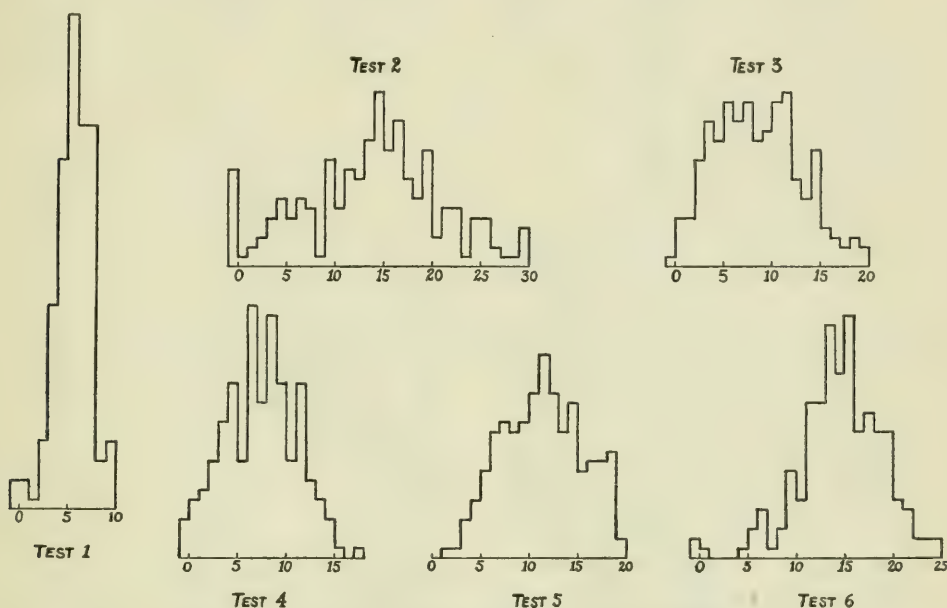


FIG. 1. BETA SUB-TEST SCORE DISTRIBUTIONS FOR 202 UNEMPLOYED MEN

bution of scores assume approximate normal form, over an almost complete scale range, but also the percentage of zero scores is distinctly lessened, from percentages varying from 1.2 to 10.0 (mean = 5.2 per cent) to percentages of 0.0 to 5.0 (mean = 1.7 per cent). For a group of 92 university

⁷ In the final form of Army Beta, one half-point was given for each half-maze completed.

Tests 3, 4 and 5, each of which includes a series of single items, show a fairly satisfactory gradation of these items by order of difficulty (percentage of correct responses) for an average group of subjects. One or two items in each sub-test appear to be definitely out of place, however, which suggests their eventual transfer to other locations in the scale. Scaling erred mostly in placing the more difficult

items too early in the series; the opposite error, that of placing comparatively easy items too far up in the scale, occurring much less frequently.

Sub-test intercorrelations vary from .44 to .79 (table 2). Tests 2, 3 and 5, which bear the strongest relationship to the total score, also intercorrelate

was found to be .029, and the observed median of the differences .021. It would appear, therefore, that a general factor permeates the data.

The reliability of Revised Beta, as indicated by the homogeneity of test-content (odd-even items), is .987 when compensated by the Spearman-Brown

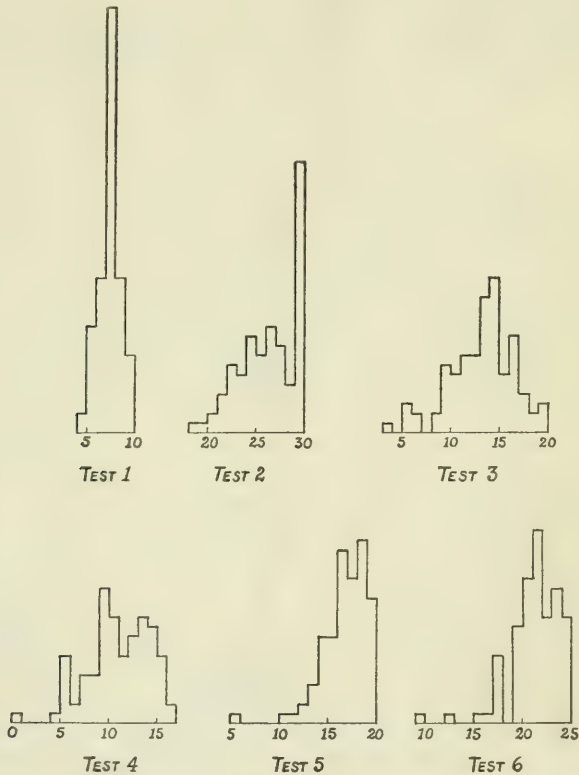


FIG. 2. BETA SUB-TEST SCORE DISTRIBUTIONS FOR 92 UNIVERSITY SOPHOMORES

with themselves and the other sub-tests more strongly than do Tests 1, 4 and 6. Determination of tetrad differences for all six tests, in order to bring the data into line for satisfying Spearman's standards for "g," has indicated that tetrad differences follow a roughly normal distribution. The probable error of the tetrad differences

formula. Similarly, compensated intercorrelation of odd and even tests gives a coefficient of .899, while intercorrelation of Tests 1, 2 and 3 with Tests 4, 5 and 6, with correction for attenuation, results in a coefficient of .904.

Retesting of a group of 60 original Grade 6 children a year later, with an

average score improvement of 9.7 points, yielded a coefficient of correlation between first and second administrations of .770. Inasmuch as the spread of scores was extremely limited, the S.D. being 9.0 for the first testing and 7.8 for the second, it may be held that a retest correlation for individuals over a wider range of ability would be substantially higher.⁸ Considerable variation was found in the retest correlation coefficients for different sub-tests, as is shown in table 3; that of Test 1 being the lowest, and those

TABLE 2

Sub-test intercorrelation coefficients and correlation with total
(N = 127)

	1	2	3	4	5	6
1	—	.601	.610	.477	.577	.441
2	.601	—	.734	.596	.714	.600
3	.610	.734	—	.554	.786	.588
4	.477	.596	.554	—	.603	.433
5	.577	.714	.786	.603	—	.630
6	.441	.600	.588	.433	.630	—
Total....	.698	.896	.872	.731	.880	.761

of Tests 4 and 6 the highest. Despite this low retest relationship, the inclusion of Test 1 may still be justified by its services as a "buffer" test.

Revised Beta correlates to the extent of $.728 \pm .024$ with Army Alpha (Psychological Corporation Revision), and $.707 \pm .018$ with the Otis Self-Administering Test of Mental Ability (Higher Examination, Form A) in the case of fully literate subjects. It correlates— $.807 \pm .020$ with the sum of time and error scores of the Thurstone

Clerical Examination, and $.553 \pm .040$ with the New Stanford Achievement Test (Advanced form V), for literate subjects. Test 4 of Revised Beta (form board) correlates $.875 \pm .014$ with Form A of the Minnesota Paper Form Board.

TABLE 3

Re-test means and correlation coefficients
(60 sixth grade children)

TEST	MEAN SCORE		r
	1932	1933	
1	6.8	7.5	.295 \pm .080
2	18.7	21.2	.638 \pm .052
3	10.8	12.6	.575 \pm .058
4	7.8	9.4	.737 \pm .040
5	13.9	15.4	.614 \pm .054
6	18.5	20.7	.737 \pm .040
Total.....	77.3	87.0	.770 \pm .034

TABLE 4

Mean scores on Revised Beta Examination for school-children, by age and grade

AGE	MEAN SCORE	GRADE	MEAN SCORE
17-6 up	96.0	11	100.0
16-6 to 17-5	96.7	10	96.4
15-6 to 16-5	92.1	9	93.2
14-6 to 15-5	85.2	8	85.6
13-6 to 14-5	82.4	7	75.6
12-6 to 13-5	74.2	6	75.5
11-6 to 12-5	71.5	5	70.0
10-6 to 11-5	65.6	4	61.5
9-6 to 10-5	60.1	3	52.6
8-6 to 9-5	53.4		
7-6 to 8-5	48.3		

Approximate grade- and age-norms for children have been determined for Revised Beta, although it is not expected that the test is primarily suited for school use (Table 4). The grades indicated are those of the Quebec (Canada) system, in which there are

⁸ Cf. Kelley, T. L. *Statistical Method*, 1924, pp. 221-22.

seven grades in elementary schools, and four grades in secondary schools. It will be noted that there is a distinct plateau of score at Grade 7. This appears to be chiefly due to the fact that this grade, being the last of the elementary school system, contains a greater number of individuals repeating the grade.

Letter-grade divisions of scores, similar to those used for Army Alpha and Army Beta, have been developed on the basis of the relationship of Army

Alpha and Revised Beta for a group of 169 literate individuals. By means of the regression lines for Alpha and Revised Beta the letter-grades for Beta were thus made comparable to those for Alpha. They are as follows:

A.....	100-123
B.....	87-99
C+.....	75-86
C.....	65-74
C-.....	55-64
D.....	45-54
E.....	0-44

Research Issues in Student Personnel Work

BY RUTH STRANG, *Teachers College, Columbia University*

Four research issues pertinent to personnel work are discussed and illustrated: (1) a cursory survey of a mass of students *versus* a careful analytical study of individuals; (2) a cross section, or snapshot picture *versus* a developmental study of individuals over a long period of time; (3) a study of end results alone *versus* observation of the process by which learning takes place; and (4) observation of an isolated fragment of the personality *versus* a consideration of the individual as a whole in his environmental setting.

It is suggested that intensive developmental study of many aspects of a considerable number of individuals during the process of learning is the most rewarding line of investigation for research workers in the field of guidance and personnel administration.

THE question of the scope of student personnel work is a controversial one. The definition formulated in 1931 by a committee of the American College Personnel Association, under the chairmanship of Robert C. Clothier, probably best represents the opinion of personnel workers in colleges and universities concerning the proper field for guidance and personnel work.

Personnel work in a college or university is the systematic bringing to bear on the individual student all those influences, of whatever nature, which will stimulate him and assist him, through his own efforts, to develop in body, mind, and character to the limit of his individual capacity for growth, and helping him to apply his powers so developed most effectively to the work of the world (1).

Although many educators may not agree with this definition, it is generally conceded that certain areas of activity belong to the field of guidance and per-

sonnel, such as educational and vocational guidance, the direction of the social program of the institution, and the counseling of students concerning a variety of personal problems. The relationship of the personnel worker to the curriculum and methods of instruction is less definitely and widely recognized. This lack of agreement as to the nature of personnel work makes the province of personnel research difficult to define.

There are, however, four critical issues which, though not peculiar to personnel research, are pertinent to this particular field: (1) the cursory survey of a mass of students *versus* the careful analytical study of individuals; (2) the cross section, or snapshot picture *versus* the developmental study of individuals over a long period of time; (3) the study of end results alone *versus* observation of the process by which learning takes place; and (4) the observation of an isolated fragment of

the personality *versus* a consideration of the individual as a whole in his environmental setting.

MASS VERSUS INDIVIDUAL

Large quantity production of data—the mass method—has often been tried and found wanting because the data were superficial and inaccurate; because the group studied was actually composed of separate factions, the unique characteristics of which were concealed in the measure of the central tendency of the sampling as a whole; or because the factors influencing the results in individual cases were given little or no consideration.

Many examples might be given of the superficiality and inaccuracy of data collected by the mass method. This inadequacy is due in part to the fact that students undoubtedly respond differently to questionnaires administered in wholesale quantities than they do to a more individualized method of obtaining information. One of the students, for example, who participated in an investigation which has gained wide recognition, said, "The students in my class who filled out the questionnaire took it as a joke and made no attempt to state facts accurately." The investigator, apparently was not conscious of this attitude on the part of some of the subjects. In investigations employing the questionnaire in a wholesale manner as a method of collecting data the research worker can never be sure that he will get an accurate reply made after due reflection.

Another example: on a personal data sheet administered to a large number of high-school boys and girls, 30 per cent of the subjects reported that

they wished they had never been born. The significance of this finding is difficult to ascertain. Was this attitude of mind a casual or a persistent tendency? Did some of the subjects hesitate to admit so pessimistic a point of view? What was the degree of intensity of this feeling? Interpreting information obtained by the mass method is difficult. Such data do not provide the answer to these and other questions of importance.

Lack of differentiation in the treatment of masses of data also limits the usefulness of this method.

Vital statisticians have long been familiar with the danger of dividing a given number of cases by the gross population of the area from which the cases have come. They realize the futility of comparing a crude rate for maternal mortality in a population made up of patients in an obstetrical ward with a similar rate for inmates of an old soldier's home (2).

Research workers in the field of guidance and personnel have been less careful about this matter. A single average score on a test of social usage, for example, obtained from pupils in a wealthy residential section and in a poor foreign neighborhood, represents neither of these two groups. The "norms" most useful to personnel workers are those which represent the central tendency of a representative sampling of a group similar to the class or school of which the student is a member.

Another difficulty is that of detecting differences in the bases of individual variations in response. A tabulation of large numbers of teachers' marks in various courses, for example, shows wide variation in the proportion in

which each mark is given to the student. Unless the investigator is cognizant of details concerning the nature of the subject and of the students in each course, he is likely to misinterpret the results, and to leave unexplained peculiar but entirely justified variations in the case of particular courses. The use of the probability curve for assigning marks to single classes is a case in point. Results of investigations in which no consideration has been given to extenuating circumstances in individual cases are extremely difficult to interpret.

It is suggested, therefore, that research workers in this field avoid the limitations of the mass method of collecting data by obtaining relevant information concerning each individual in an adequate sampling of the group studied; by describing significant features of the situation in which the data were secured; and by summarizing the findings in terms of frequency distributions of a fairly homogeneous group.

CROSS SECTION VERSUS DEVELOPMENT

The development or growth of the individual is the chief concern of personnel work. The personnel worker thinks of the student as a bundle of possibilities, and focuses his attention on what the individual may become. Cross section or snapshot investigations do not reveal trends in a person's development nor do they show how the observed changes have taken place. Cross section investigations do not answer many of the personnel worker's most pressing questions.

The Carnegie Foundation for the Advancement of Teaching through preparation and promotion of the cumu-

lative record, and also the Coöperative Test Service through development of an adequate number of equivalent forms of tests, have given a tremendous impetus to developmental studies in higher education.

There should be an increasing number of follow-up studies such as those being carried on by E. L. Thorndike and Leta S. Hollingworth. Thorndike and his associates have followed over a period of ten years the vocational and educational careers of groups of elementary school children, and Hollingworth and her students are still engaged in following through college fifty-six children who at approximately eight years of age tested at or above an intelligence quotient of 135. By means of researches such as these, the predictive value of psychological inventories made in childhood may be ascertained.

STUDY OF END RESULTS ALONE VERSUS OBSERVATION OF THE PROCESS

It is of value only as a first step for a personnel worker to know the number of failing students, those who show neurotic tendencies, or those who participate in extra-curriculum activities. More useful is knowledge of the combination of factors in the individual and his environment that have resulted in certain behavior significant in his development. The personnel worker must understand the process by which learning takes place, not the end result alone.

Very few investigators have studied the learning process. One of the earliest experiments with rats did include detailed observations of the proc-

ess of learning, but many later experimenters have focused their attention upon length of time and number of repetitions required to attain a certain proficiency. The young Russian psychologist, A. Luria, has taken an important step in studying the nature of human conflicts by using simple apparatus which records the hand movements intervening between stimuli and responses. In every area of work with individuals, the majority of investigations have come to a dead stop before reaching the point of their greatest usefulness.

It is suggested, therefore, that extensive research is needed which will show the psychological and social processes by which a student of a given level of intelligence achieves scholastic success, extracts developmental value from extra-class activities, grows in emotional control, and acquires a co-operative attitude.

PARTS VERSUS WHOLES

The most controversial of the four issues is the study of parts *versus* wholes. This involves the question of whether to isolate a specific part of the student's personality which can be observed under controlled conditions, or to attempt to study in a far less scientific way the individual in his complex educational environment. The investigator seems to be between the devil of uncontrolled variables and the deep blue sea of impractical results. Definite and valid conclusions may be drawn from the first type of research, but such findings cannot be applied directly to practical personnel work. A vast number of intermediate investi-

gations are needed in order to relay the results of laboratory experimentation to the goal of practical usefulness. Lashley believes "there is a greater hope for a solution of some of the fundamental problems in controlled laboratory studies," than in "field studies and experiments in social control." (3) The value of adequately controlled experimentation cannot be questioned except in so far as a part of the personality taken out of its total setting is a hypothetical entity—[something] different from the same part in its natural configuration. Both types of investigation have value. One supplements the other. There is a reciprocal relation between them, one suggesting important factors for intensive study; the other devising and evaluating methods and presenting facts which through intermediary researches may eventually be applied in school situations.

Attempts to study an individual in a complex natural situation are likely to be inconclusive because

the situations encountered are so complex and the contributory factors so numerous as to defy analysis even by the most refined statistical means (3).

But the idea of relativity is permeating every field of science. In physiology and medicine, increased emphasis is being put upon the study of the organism *in vivo*. And chemistry and physics are being integrated with biology and medicine in a way which led Jacques Loeb to reply to the inquiry whether he was a physiologist or a chemist by saying, "I do not know; I study problems." The sociologist, too, is seeking to make his investigations *in vivo*, as it were, and is search-

ing for methods of studying relationships more adequately.

The personnel worker, likewise, "studies problems," and uses methods and facts obtained from the related fields of psychology, sociology, and biology. One important function of personnel research is to combine and apply in new ways the results of investigations in many fields.

Attempts have already been made to study the individual in his environment and to make an evaluation of a complex of factors. Investigations which aim to describe and evaluate the effects of changes in the personnel program of a particular institution have been made by Moon (4) at the University of Chicago, Hindmarsh (5) at Harvard, and Jones (6) at the University of Iowa.

The peculiar characteristic of student personnel research is the study of the "whole" individual. Its most appropriate technic for this purpose is the case study, and its peculiar problem

is that of devising methods of studying the individual in his environment in such a way that valid conclusions, not masses of inconclusive data, will result.

SUMMARY

It is suggested that the person contemplating research in the field of student personnel work consider the advisability of making developmental investigations of the learning processes of individuals in their environment rather than mass cross section studies of some isolated aspect of personality.

Two immediate steps which might well be undertaken immediately are: (1) an adequate summary of previous investigations in this field in order that methods and conclusions found to be of value may be brought to light and deficiencies in knowledge be recognized, and (2) the outlining of a program of investigations in order that duplication of effort may be avoided and the work in one institution reinforce and supplement that in another center.

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What Is Psychology?

BY ELEANOR ROWLAND WEMBRIDGE

Dr. Wembridge pleads for a teaching of psychology which introduces the learner not only to the methods and results of laboratory research but to behavior "in the raw." Certainly anyone who later is to become an industrial psychologist or a business executive needs most of all a real insight into motives, emotions and vagaries of conduct such as the author of "Life Among the Low-brows," and "Other People's Daughters," has gained since she left the class-room for the juvenile court.

IT NECESSARILY makes a profound impression upon a person's point of view to be transferred from his own profession to another radically different, from which vantage point he critically contemplates the first. Such has been my experience with the science of psychology. Trained along conventional lines in the Harvard laboratory, and teaching more or less along those lines in the laboratories and class-rooms of two colleges, I left this work and eventually found myself acting with judicial duties as a juvenile court referee.

My problem in the old days had been to interest students in facts about their sense organs, motor apparatus, and intellectual faculties. Students supposedly left the course with detailed information in their note-books as to color vision, temperature spots, tuning forks, and muscular reflexes. They had compared reactions to simple stimuli, and noted that their attention was unstable, their memories inaccurate. They had administered intelligence tests to average people, and read

of abnormal ones, but seldom observed them closely enough to know what they were observing. Emotional phenomena were studied, but with illustrative material drawn largely from animals. Neither students nor outsiders could be relied upon to exhibit the furies of rage or the languors of love in a laboratory, while they were being looked at. If they were actually melancholy, their symptoms were not recorded upon our charts. If their social traditions were in upheaval, their family life intolerable, or their instincts warped, they were sent to the dean, and not to ministering scientists. Such was my teaching experience.

Finding myself in a court-room, where I had been placed because my psychology was supposed to throw light upon human problems, I searched my laboratory note-book in vain for a guide to the prediction of behavior. What I knew of after-images, of blind spots, and of knee-jerks, of percepts and concepts, of structure and function controversy, and of squabbles

between opposing schools, was about as irrelevant as what I might recall of the dative case. The species in the laboratory and in the court had apparently never met. In my own defense, I will say that I had felt this discrepancy even when teaching. But the routine requirements of curriculum and text, plus my own inexperience, kept me in line. I can recall now that my distinguished Harvard teachers, though busy establishing psychology laboratories, refused to be dazzled by them, and frequently warned me as a student that a laboratory was not life. This fact I was now finding out for myself. But many of my professional colleagues flatly denied its importance. When I protested that many of the data which emanated from psychology laboratories, while true, were relatively unimportant, they retorted: "*Nothing that is true is unimportant.*" I used to say the same myself, but I have changed my mind. In a careless era, it may be harmless to count and recount, chart and re-chart, isolated reactions that bear on nothing in particular. During a flood or a fire, such amiable trivialities become to my mind indefensible. In times like these, when human beings are running amuck on the streets, and when even the most experienced are at a loss what to do with people whose actions, motives, obsessions, and satisfactions fall into strange patterns, a laboratory devoted to super-simplified stimuli and responses seems like fiddling while Rome burns!

What now faces me, and others like me, in a court-room? Delinquents, not yet eighteen, who have been charged with or caught doing something against

the law. What motives drive them on? What deterrents hold them back? How much of what they say is true? How can we separate the true, the partly true, and the wholly false? Why do some of them lie to make their offense more serious instead of less so? How to distinguish those whose emotional life is violent, and those whose emotions are strangely absent? How to treat both types? At what physical and mental age do certain motives operate? How explain changes of story that have no observable reason? How much intelligence is necessary, and what type, for this and that treatment? These questions multiply endlessly. They must be answered practically in the life and fortunes of human beings, and they must be answered with some rapidity. To none of these questions do I find that the psychology laboratory gives the answer, and in few of them does it even seem to be interested.

Three types of excuse have been given me for this apathy of academic psychology toward human behavior in the raw. The first is that psychology is a young science, and must begin with the simple laboratory response before it can work up to the complex vital phenomenon. This answer satisfied me as a student. Perhaps it was true in that far-off era! But since then we have had a war, with a vast amount of data digested from army records. Psychiatry, then a fledgling science, has developed myriad clinics, where it uses psychological technique in handling cases which were never known to college laboratories. Anthropology has brought us the customs of strange people studied at close range

by trained observers. Education has enlarged the understanding of psychometrics and of the learning process, by the study of thousands of children unavailable to any laboratories but their own. Hollywood and the modern zoo, to say nothing of more academic observers, now know animal life in the bush, in a manner far more important than the study of tame animals at home. Statistics now dominate all experimental work.

Judging by this rate of progress of the other sciences, it would seem as if the psychology of my own class-room ought to be as out of date as the clumsy cars and lumbering flying machines of that period. But to my astonishment, when I inquire of college students what they now study in psychology, the chances are it is not only what I taught fifteen years ago, but what I studied twenty-five years ago! A quarter of a century is a long time in modern science. Progress has been amazing. Yet many a student is not getting any more light thrown on his emotional life now than in the day of Professor James. No new conclusions are drawn in many a class-room from reaction times than were drawn by Professor Münsterberg. And the mice in their mazes tell no story that they did not tell Professor Yerkes when I first met him. In those days, psychology held in her hand all the sciencies of human behavior: psychiatry, penology, social psychology, anthropology, educational measurements. But because human life turned out to be too rich to flourish in her sedately equipped laboratory, her hold became indifferent. Life's most important phenomena were flung out of doors to hungry young sciences eager

to snatch them up, and psychology was left inside, clutching a handful of straw.

Another answer given me for the faint interest which academic psychology has in life, is that life in the raw cannot be studied scientifically. "Psychology must and can be as exact as physics," they say. Or, reversely stated; "Any occurrences that cannot be charted as exactly as a mathematical equation must be ignored by psychology until they can." This attitude seems to me to spring from a kind of nervousness as to what the other sciences will "think of us" if we are not as exact as they! Of course, the more exact any science can be, the better. But it is hardly profitable to rule out all interesting matter whose units of measurement are yet undiscovered—and may *never be* in our lifetime.

Other sciences are intrepid enough. Why must psychology be so timid? If the upper spaces decline to come down to the laboratory, the scientist goes up into the stratosphere. If deep-sea life cannot be observed from an aquarium, the scientist visits it in a bathosphere. Botanists are not content with pressed flowers or glass ones. They travel to Mongolia or equatorial forests to find new ones. Theories of what primitive people are like have given way to studies made in person by scientists who have taken the trouble to visit them and learn their language and their ways. Gorillas are studied in the jungle instead of in a circus cage. And the newer geography has its old maps embellished by photography from airplanes. There is little that is mathematical in these explorations. But there is much robust

curiosity, vital energy, and a complete indifference as to what their neighbors, chemistry and physics, may think!

A grim smile comes to my lips when I recall any apparatus I have seen in a laboratory for measuring with any finesse reactions to stimuli, and imagine applying it to some of my hysterical young friends who are kicking their heels on the floor, or biting their opponents in the eye. The contrast between the sober emotions of a laboratory and the tantrums of a gunman's moll at her liveliest, is so hopelessly absurd that perhaps I may be pardoned for my complaints at the inadequacy of the emotional studies of my own science. Some exact unit of measurement may be devised for such volcanic outbursts, and in time we may foresee and curb them. But they certainly cannot be appreciated if they are never witnessed. And one wonders why, if they are not interested in such demonstrations, some psychologists even include in their texts the study of emotions.

Still a third objection to my criticisms is a natural one. Some of my colleagues say, "Just because you work with undisciplined people, you overrate their importance. Delinquents are in your foreground, and give you a wrong slant on normal human behavior, which after all is what we are interested in." There is some truth to this statement. Naturally one tends to see one's own experience somewhat out of proportion to the world as a whole. Granted that the court-room is far removed from the academic circle, and that, happily, but a small fraction of our citizens are arrested for misconduct; nevertheless

there are plenty of human problems outside of court and within college walls, to which many psychologists are as indifferent as if they taught Latin or astronomy. Take the disappearance of money an occurrence which faces all college faculties from time to time. Frequently the offender is discovered by the usual devices of shadowing or marked money. He is then brought before the dean. Perhaps he is asked to leave the campus. Perhaps he is given his degree with no hint to his family or his future employers, and only a secret warning to himself. His tortured inner life is often given less study than our court bestows upon some hapless moron caught shoplifting. Or take the occasions when students become involved in strange and perhaps perverse sex antics which horrify the faculty and usually send the hapless offender out of town veiled in a discreet secrecy—his family as well as his mates only half aware of what was wrong. The psychology department is as quick as any other to dispose of the student as a crook, and he is treated less understandingly than he would be in a modern court clinic.

One does not need to be in a court-room to meet the stutterer, those suffering from facial ties, from exhibitionistic tendencies, from homo-sexual drives, from morbid shyness or homesickness, from fantastic ideas, from nightmares, from alternating mental torment and exaltation. Some colleges have recognized what a rich field for study lies within their own walls, and make the most of it. They tell me, however, that the type of psychology for which I plead is to be found not so much in the main courses, papers,

and experiments in our universities, but in the so-called "special" courses offered in child, social, educational, abnormal psychology; in the personnel departments; the mental hygiene clinics; the summer school sessions for teachers. In short, the application of the science to human problems is reserved for the specialists in the field, and so arranged that the average students who make up the bulk of our college population know nothing of it. It would seem to me that it ought to be the other way around. They must meet these problems in life; are already meeting them. Why not study them in college under guidance?

I have read hundreds of reports made by psychiatrists on my court cases. I depend upon them and find them most helpful. Nevertheless, I can truthfully say that their analyses are entirely psychological in content. There is not a word of theirs that I have ever read that could not have been written by a well trained psychologist, who had taken the trouble to get acquainted with his own species as the psychiatrists have done. In all universities, the engineers, the chemists, the physicists, the architects, the literary men are consulted on matters pertaining to their own field, and have an answer ready. But I have known plenty of psychologists whose opinion on practical human problems is no better, and perhaps worse, than the opinion of any man in the street.

I am still embarrassed at the reaction of our audience, when visiting psychologists were invited to lecture to a group anxious to learn of the newer trends, and the sole illustration used by one of them, to which he persistently re-

turned, was "the perception of dots." The other confined himself to gray rats in a maze with the admonition that not yet, after a quarter of a century of study, could one be certain that his conclusions applied equally to white rats. Such fare for hungry sheep! My confrères could only look at me and laugh as I threw up my hands in despair. I was not alone in my professional embarrassment. But other insurgents protest that they are helpless. They must conform to traditional methods if they are subordinates. They are considered, "morbid," "sensational," and "unscientific" if they step out of line. As a result, if their students are interested primarily in the human race, they must seek information about its most significant aspects either in the advanced or special courses, or in other departments altogether. As one practical result of this refusal to contemplate the "behavior" about which we argue so much, behavior-clinics over the United States are almost invariably in charge of psychiatrists, with psychologists, at a smaller salary, doing routine work at their bidding. A strange heritage indeed for children of the mother science!

We are living in a confused and baffling world; the activities of its citizens are as unpredictable as yet as its air-currents and cosmic-rays, and as worthy of study at close range. When I compare the richness of the fare offered in other departments of research, I wonder how long the more gifted students will come to us. Must psychology die of slow starvation with plenty all around? Or is there a strong fresh current of new life surging into it, that

I fail to recognize in the literature, the lectures, and the conference reports of today? I sincerely hope that there is, and that my failure to see, is due to my defective vision, rather than to defects in a science to which my pro-

fessional life has been devoted. The unusual feature of my somewhat violent diatribe against my own field, is that I long to have it proved to me that my complaints against it are unfounded, and that no apologies for it are required.

News Notes

HOURS OF WORK AND RECOVERY

The principle that the spreading of employment will assist in hastening recovery is now facing its crucial test. The strict limitation of working hours, though widely hailed a year ago as a necessary measure in lessening the staggering burden of relief, has come to be regarded by many as a restraint upon the increasing momentum of business enterprise. Labor officials and government spokesmen, on the one hand, are reiterating the claim that shorter hours and increased rates of wages are essential to a sustained advance. Industrial executives and students of economic history, on the other hand, are expressing their apprehension that shorter hours will not only reduce actual and potential output and therefore prosperity, but that the increased costs involved may so diminish the opportunities for profitable operations that recovery will be delayed.

In order to aid in the solution of this problem, the Industrial Relations Section of Princeton University has gathered together facts and considerations that bear upon the problem, and has published these in a pamphlet called *Hours of Work and Recovery: A Summary of Fact and Opinion*. The main trends in the history of hours legislation in this country, the principle features of the recovery legislation and industrial codes, the significant problems and experience which have developed, and the opinions of leading proponents or critics of the various principles involved are presented.

SILVER BAY INDUSTRIAL INSTITUTE

This summer's session of the Silver Bay Industrial Institute, held July 9 to 14, was devoted to intimate discussion of industrial relations problems of management growing out of the NRA. The subjects discussed included: arrangement of hours under the

codes; wage adjustments above the minimum; collective bargaining; recruiting skilled labor after a long period when many have retired and none have been trained; comprehensive program of social and economic reform; the smaller industries under the NRA; unemployment insurance. C. R. Dooley, Director of Industrial Relations of the Socony-Vacuum Corporation, is Chairman of the Industrial Institute Committee.

MINNESOTA STATE CONFERENCE ON VOCATIONAL GUIDANCE

The *Proceedings of the Minnesota State Conference on Vocational Guidance* have been published by the University of Minnesota Press. This pamphlet describes, first, three group discussions dealing with (1) Methods of Diagnosis and Counseling in Guidance, (2) Work Opportunities and Job Requirements, and (3) Adjusting Curricula to the Individual. The core of the conference, however, was a series of "structural" and "functional" committees. The deliberations and recommendations of these committees are reported in full.

"A summary of committee recommendations reveals the following as highlights of the conference's thinking and action. In the reports submitted by the five structural committees, education is defined as being concerned primarily with individual pupil growth rather than with meaningless educational labels. To foster pupil growth, guidance must become an integral part of the philosophy underlying educational administration. Emphasis is placed on the need for coordinating committees to integrate guidance on all educational levels and to dovetail educational guidance with occupational guidance for the worker in business and industry. These committees also stressed the need for (1) more and better trained counselors in education and in

industry; (2) the adoption and use of cumulative records; and (3) research to provide better methods for diagnosing the individual.

"In the reports prepared by the seven functional committees there seemed to be a tacit admission that traditional education is out of step with the practical demands of life. Hence broad-scale socialized fact-finding must be instituted to bring the two into better alignment. Through improved methods of guidance the facts are to be disseminated and acted upon. To accomplish this aim, recommendations for government and service organization surveys were made so that adequate information on occupational needs and trends would be forthcoming. The need for research on the effectiveness of guidance methods, measuring instruments, and curricular revision was also pointed out. Again, the necessity for cumulative records is recognized. Better trained counselors and the more effective coordination of the activities of guidance workers was also advocated. To bring about this coordination, the conference as a whole recommended that a statewide guidance organization should be established."

The Proceedings were edited by Donald G. Paterson.

CHOOSING-A-CAREER CONFERENCE

A "choosing-a-career conference," sponsored by L. Bamberger and Company, was held in Newark, N. J., June 26 to 28. Designed to aid young college graduates, the conference took the form of a series of speeches by prominent men and women in various occupations. Speakers included Bruce Barton, Kermit Roosevelt, James P. Warburg, S. L. Rothafel, Frank Hawkes, M. H. Aylesworth, Fannie Hurst, Jack Straus, and Edward L. Bernays.

The speeches will appear in book form.

CHURCH GROUP MAKES STATEMENT ON THE RIGHTS OF LABOR

The Executive Committee of the Federal Council of Churches recently issued the following statement, making clear its stand concerning the "rights of labor":

"The increasing tension between labor and management in some of the great industries of the nation creates a serious menace to civic order and social progress. We have previously expressed our hearty endorsement of the policy of the federal government, embodied in the National Industrial Recovery Act, affirming the right of employees, as well as employers, to bargain collectively through persons freely chosen by themselves to represent their interests. This principle has long been advocated by leading church and civic bodies and has been amply demonstrated in major industries as practicable and desirable. This is not class legislation, but a guarantee of rights without which labor cannot hope to maintain its standards against strongly organized aggregations of capital when there is conflict of interests. Industry is in a much healthier state when workers and employers are alike organized with prescribed rights and accepted responsibilities. Among the responsibilities thus incurred by labor is the free admission to its membership of competent workers without distinctions of nationality or race.

"Serious conflict has arisen over the refusal of strong employing groups to recognize trade unions and their determination to limit negotiations with labor to dealings with their own employees. The reasons for labor's insistence upon a broad basis of organization and upon representation of the workers by persons chosen and paid by themselves are too plain for argument. They are precisely the same reasons that impel employers to organize and to secure the ablest representatives of their own interests, chosen and paid by themselves. We appeal for fair play in accord with the plain intent of an act of Congress and with a principle for which the churches have long contended. When labor is denied the right of free choice of representatives and when employers refuse to deal with representatives so chosen, the spirit and purpose of justice and democracy are thwarted.

"We make this appeal, however, not merely in the interest of what is known as collective bargaining but in the interest of democratic social progress, which requires that the many functional groups of various

types in modern society shall have scope for the development of standards and methods of action for which they may be properly held responsible. That abuses of power have occurred on the part of labor as on the part of other groups may be freely admitted, but these cannot be pleaded as excusing a denial of justice. We are convinced that full recognition of social rights is the best assurance of responsible and wholesome social action. It is for such recognition that we urgently appeal."

SUPPLY AND DEMAND FOR COLLEGE TEACHERS

Officials in institutions of higher learning in America do not have readily accessible an adequate body of data on the availability of well-prepared individuals for their staffs or on the opportunities that exist in the field of college training. Students about to enter upon graduate training have no way of finding out which fields of teaching are least overcrowded.

This deficiency in our knowledge has been corrected to an encouraging degree by an investigation recently completed by James G. Umstattd. His report has been published by the University of Minnesota Press under the title *Supply and Demand of College Teachers* (50 cents). Although it probably is impossible to develop at the present time entirely adequate measures of demand and supply, Dr. Umstattd's findings may be accepted as approximately true. He finds of course grave maladjustment between supply and demand for college teachers in general. But this maladjustment is by no means equal for all subject matter fields. Oversupply of men teachers is greatest in religious education, psychology, science, philosophy, agriculture, history, Latin, pharmacy, education, and forestry; and of women in psychology, science,

religious education, Latin, history, mathematics, and the "classics." On the whole, oversupply was found to be greater among men than among women teachers.

PERSONAL ITEMS

Colonel M. C. Rorty has been elected President of the American Management Association. At the same time Alvin E. Dodd was elected Executive Vice-President and John G. Goetz was re-elected Secretary; Samuel A. Lewisohn, Chairman of the Board of Directors; Arthur H. Young, Chairman of the Executive Committee.

Dr. Harold C. Taylor, formerly Assistant in Psychology, Institute of Human Relations, Yale University, has joined the staff of the Industrial Relations Division of The Procter and Gamble Company as technical assistant on research.

Willard Parker, formerly with the Rochester Public Employment Center, has joined the Personnel Staff of the Federal Farm Credit Administration. He is stationed at St. Louis.

FORTHCOMING MEETINGS

August 22-25

Seventeenth Annual Conference on Industrial Relations, National Council of Y. M. C. A.'s, Silver Bay, New York

September 5-8

Annual Meeting of the American Psychological Association, New York

September 11-15

Eighth International Psychotechnical Conference, Prague

November 15-16

Thirteenth Annual Autumn Conference, Personnel Research Federation, New York

Personnel Books

EDITED BY O. MILTON HALL

MINERS AND MANAGEMENT

By Mary van Kleeck. New York: Russell Sage Foundation, 1934, 391 pp., \$2.00

Reviewed by ORDWAY TEAD, *Harper and Brothers*

Miss van Kleeck's most recent book is unquestionably the most significant study which has come out in the Industrial Relations Series of the Russell Sage Foundation. It comprises an analysis of the collective agreement entered into between the Rocky Mountain Fuel Company and the United Mine Workers of America, beginning in 1928; and, as Part II of the book, a more general analysis of the bituminous coal problem in this country is set forth.

This study is important for at least three reasons. First, it offers an object lesson of successful collective bargaining under the leadership of an able and liberal executive, Miss Josephine Roche, who is the controlling stockholder. Second, it shows what a collective agreement under creative leadership can do as contrasted with the difficulties of company union relations, at a time when these two forms of negotiation are in competition for public favor because of Clause 7A of the NRA. And, third, it projects the philosophy of scientific management as it has become familiar in industrial practice, out from the individual company and into the affairs of an industry as a whole,—indicating the need for a type of economic planning by industries which has thus far received too scant attention.

As respects the success of this collective arrangement in terms of a going concern, Miss Roche had the following to say in 1931:

"Our company, operating under a union contract and paying the highest miners' wages in the state, has had its operating costs substantially reduced, its production

per man greatly increased, and with state coal production decreasing about twenty-five per cent this year below the same period last year our company's tonnage has not suffered a decline."

The author's own conclusions, reached two years later, corroborate these findings in the following words:

"The important points in this record are that the company has more than held its own in the markets of the state; that its mine operating profits have increased; that it has been able to pay every cent of interest on its bonded indebtedness on the dates due; and that it has maintained for the miners a wage scale set by agreement, and has increased their stability of employment. Its strength lies in its internal relationships and in what ought to be regarded as the most important phase of its operations, the productivity of labor and the goodwill characterizing relations between workers and management."

While the book makes no direct comparison between the agreement here studied and the company union which has long been in operation in the Colorado Fuel & Iron Company, it is interesting to observe that the latter corporation has experienced severe financial strain incident to the depression which must have affected seriously its relations with its workers. Whether the existence of a collective agreement in the Colorado Fuel & Iron Company might have forestalled its financial reverses, I have no way of knowing. But this book makes clear that the competitive struggle has

been intense in bituminous coal and is a conditioning factor that enters into every effort to build up stable relations with employees in this competitive area.

In fact, it is no doubt primarily because of the disorganization of this industry throughout the country, brought about by excessive competition, that Miss van Kleeck felt justified in taking as strong a line as she does in the section dealing with the industry as a whole.

There will be those who will find this section of the book doctrinaire and not a logical conclusion from her facts. But anyone who knows Miss van Kleeck will realize that her advocacy of the socialization of the coal industry has come out of a long, earnest and dispassionate consideration of the problem. Nor is she alone in her conclusion among those who have taken the time to become familiar with its elements. Briefly, the forecast to which she comes is set forth in the following paragraphs:

"Scientific management must be given freedom to operate over the coal industry as a whole, but scientific management is possible in one industry only as part of a total planned economy, and this is im-

possible for capitalism. It requires social ownership and administration as the logical and inevitable next step in the evolution of the economic system. But the science here put forward is not the science of the technician alone, but science in the service of workers and producers, whose collective action can build not only an economic system but a human society."

From the point of view of most personnel workers, the emphasis which Miss van Kleeck puts upon the crucial rôle which the workers must play in effecting the transition to socialization which she advocates, will seem unfamiliar, and in the current vocabulary, "radical." For she says flatly, "It is the workers who must lead in the upbuilding of a new system." But those who are familiar with the trend in other capitalist countries toward a recognition of the rôle of the workers in effecting basic social changes will not be greatly startled. In any event, here is a realistic study by an honest mind which will repay careful pondering by every executive and especially by executives interested in the development of the right relations between management and workers.

PEOPLE AT WORK

By Frances Perkins. New York: John Day, 1934, 287 pp., \$2.50

Reviewed by DONALD S. BRIDGMAN, *New York*

Miss Perkins' preface calls this book the result of many discussions with people who wish vicarious experience of the wage-earner's way of life and of mass production industrial problems. "These discussions have been popular rather than profound and are presented as a possible service to others who are making a rapid quest for a little information in this field." It would be less than fair to expect more than the author promises, but many readers will have hoped to approach closer to the foundations of Miss Perkins' convictions as well as her faith.

Two-thirds of the book is primarily a narrative of dramatic episodes in the nation's industrial development and of the growing public recognition of the human problems accompanying it. This runs from

Colonial days and the "fair long paradise" of the Lowell factory system in the 1820's through the "deflation of human life" which followed the rapid population increases of the early nineteenth century both here and in England, with instances of poverty, filth and disease, to the 1911 Triangle fire and the social legislation it brought forth, the uneven prosperity of the 1920's with their growing unemployment, and the crushing impact of this depression both on total payrolls and on individual lives. This part of the book is concluded with an account of the present Administration's efforts for recovery through public works and the N.I.R.A., especially as exemplified by the cotton and steel codes, and their results up to March of this year.

In the main, this is an effective, swift-

running and often moving narrative of significant events and their effect on public opinion, but the reader is frequently pulled up short by observations on economic trends and problems and, before he can grasp them, is suddenly tumbled into the next decade and a new episode. This is confusing, especially when occasionally he is puzzled by a dramatic but hasty and somewhat obscure sentence.

Many of these observations might better have been left for the book's final chapters, in which the author discusses more directly the types of unemployment and the ways to combat them, the standards of a good job, the implications of a surplus economy and the safeguards it needs. Here is an especially thought-provoking discussion of the replacement through technological change and the resulting economic shifts of a highly paid skilled mechanic by two or three low wage younger workers in distribution or personal service work. There are excellent pages, too, on seasonal unemployment, safety, high standard working conditions, and the evils of child labor. The bare mention of Clause 7a in terms of its objectives and as insuring workers the right to act through a committee as citizens do in protesting poor garbage removal, is regrettable but understandable.

As a preventive of major depressions in a surplus economy, Miss Perkins puts her faith almost solely in the high mass purchasing power theory secured in part by minimum wages, the spread of employment through shortened hours, and old age pen-

sions. If, in spite of them, economic vigor declines, it is to be restored by the use of public works and unemployment insurance. Obviously she could not treat in this book such matters as the price and credit structure, trends of population growth, the balance between capital and consumption goods, and the motives of business enterprises under capitalism, particularly those involving new investment. But more recognition of their great importance is sorely needed and, without it, the efficacy of these other remedies is bound to be exaggerated. Certainly there seem to be severe limits on the extent to which public works or any seriously proposed unemployment insurance plan can halt the downswing of a major depression such as this. Her failure to give due weight to these complexities permits Miss Perkins to compare "the conception of consciously tinkering with the economic machine" to the repair of the automobile or plumbing "by the experimental use of whatever gadgets or personal belongings have taken the place of the hair-pin," and to assert that the winter's coal and the baby's milk "must always precede generalized abstract theory in our own thinking."

Nevertheless, "People at Work" does contribute to intelligent understanding of those essential problems with which it deals and will do its full part in arousing that grave and militant concern for "an industrial life good in human terms" without which this civilization will hardly survive.

TECHNICS AND CIVILIZATION

By Lewis Mumford. New York: Harcourt Brace, 1934, 506 pp., \$4.50

Reviewed by C. S. SLOCOMBE, Personnel Research Federation

Mr. Mumford's latest and most fascinating book may appropriately be divided into two parts. In the first half he reviews the culture which preceded the machine and then passes to the development of the machine from its earliest forms to the latest Burlington Zephyr. Beginning with the monastery clock invented by a monk near the end of the tenth century, through nine

centuries to the latest airplanes and streamline cars, Mr. Mumford writes an entrancing tale of the machine's history. The monk, the soldier, the miner, and the financier are the main contributors to this development. The material has been organized by dividing the evolution of the machine into three phases. We are now in the neotechnic phase.

The latter half of his book is a discussion of the effect of this machine development on man as regards both his individual and his social personality. In these ten centuries, Mr. Mumford sees leadership shifting from the subjective to the objective personality. This objective point of view in the modern world has produced a new interest in and acceptance of the material world of fact which man has discovered. Man has yet much to learn from this new world of facts. These lessons must be absorbed before a "more richly organic, profoundly, human development is possible."

Mr. Mumford thinks that indefinite growth in speed, size of machines, population, wealth, etc., is no longer possible. After ten centuries the machine system is beginning to reach a "state of internal

equilibrium" which is the keynote of our opening age. This dynamic equilibrium must take place in environment, the relation between industry and agriculture, and in population. It is only in a balanced and integrated world that human personality may be developed as a whole—and this according to Mr. Mumford is the true end and aim of life.

The psychologist will find stimulation in this book but few specific answers to his problems. He may take issue with some of Mr. Mumford's views and opinions on man's personality problems both past and future, but he will find a broad perspective and well organized historical background for his own work, which will provide a satisfying orientation.

ATTITUDES AND UNEMPLOYMENT

By O. Milton Hall. New York: Columbia University (Archives of Psychology), 1934, 65 pp., \$1.00

Reviewed by RICHARD STEPHEN UHRBROCK, *The Procter and Gamble Company*

This study of attitudes of employed and unemployed engineers, is one of the few factual reports that have emerged as by-products of the period of depression. It will be welcomed by industrial relations men as a careful piece of work where scientific ingenuity and interest were focused on a problem of prime importance and where recently developed techniques were utilized to study the reactions of mature individuals who were industrially oriented. Hall has told a dramatic story of the fears and changing beliefs of men who stand on the various rungs of the ladder of economic security. It will not be many years before familiarity with this study will be one of the marks of the enlightened personnel man.

The study was made in the spring of 1932 when at least thirty per cent of New York City professional engineers were unemployed. Approximately nine hundred men coöperated in filling out attitude questionnaires and personal history blanks. Data concerning age, salary, nativity, education, religion, state licensing, and marital status were studied in an attempt to discover the relationship between attitudes

and economic security. Three hundred usable records were obtained from employed engineers and 360 from unemployed. Half of the unemployed engineers whose records were used had been out of work thirty-nine weeks or longer. The median age of the men in the two groups of employed and unemployed was approximately 37 years.

This report is loaded with facts of enormous social importance. It is difficult to refrain from quoting extensively. Hall found that "23 per cent of unemployed men as against 6 per cent of employed men, held that 'a revolution might be a good thing for this country.'" Employment managers will be interested in the effect of unemployment upon future hiring. It was discovered that "three times as many unemployed as employed men felt that 'it doesn't pay to work too hard because employers will only take advantage of you.'" This is especially significant, when we note that the men between thirty and forty years of age were most bitter toward employers.

As might be expected, distinct differences in occupational morale were discovered in the various groups studied. Among the

unemployed, the destitute who had received no work relief were lowest in morale. Among the employed, those in the higher salary classifications felt most secure. Hall has demonstrated quite conclusively that occupational morale is related to economic security.

It is beyond the province of a study of this kind to discuss the possibility that there may be a point on the scale of occupational morale where dissatisfaction with the present order may be expected to result in direct action. The thoughtful reader of this report will have that point in mind, however.

THE TECHNIQUE OF SOCIAL INVESTIGATION.

By C. Luther Fry. New York: Harper, 1934, 315 pp., \$2.50.

This is a manual for the conduct of social research. It tells the beginner how to plan a study. It describes the various techniques of fact-gathering: direct observation, interviewing, questionnaires and enumerations, experimentation and tests. Latter chapters give aids to interpreting findings, preparing the report, and disseminating the findings, while the final chapter, adopting a broader approach, evaluates the possibilities and recognizes the limitations of social research. Over fifty pages of annotated bibliography supplement the necessarily rather elementary treatment of the text.

THE ABC OF THE NRA. By Charles Dear-
ing, Paul T. Homan, Lewis L. Lorwin and
Leverett S. Lyon. Washington: Brook-
ings Institution, 1934, 185 pp., \$1.50.

This book is as elementary as its title implies. It gives a brief and convenient summary of the NRA situation up to February, 1934. The authors properly confine themselves to a purely factual exposition, leaving any efforts at appraisal to later studies which the Brookings Institution now has under way.

INSTITUTIONAL BEHAVIOR. By Floyd H.
Allport, Chapel Hill: Univ. of North
Carolina Press, 1933, 526 pp., \$3.50.

Professor Allport well sets forth in his own words the purpose of this volume.

The author is to be commended for publishing his complete questionnaire covering attitude toward employers, attitude toward religion, and scales for measuring occupational morale. Employers and relief agencies may use these "social barometers" in studying other groups.

This report will be of immediate and future interest to personnel men, vocational counselors, relief agency administrators, psychologists, and educators. It is safe to predict that the small edition in which it has been printed will be speedily exhausted, because it is particularly timely, scientific, and well-written.

"During the past ten years I have been pointing out the inadequacies which seem to me to arise from talking about 'societal' entities, such as groups and institutions, as though they possessed human qualities, causal potency, or characteristics for objective, scientific study. . . . In this book I have examined these group approaches more thoroughly, and have tested them not merely by the criterion of scientific method, but by tracing their consequences throughout human relationships and the structure of social organization. And in contrast with the societal view, I have outlined, however inadequately, the beginnings of a new orientation: I have tried to reinterpret both institution and society in terms of the behavior of individuals."

Institutions which are studied from this point of view include the political, economic, the familial, educational, and religious. And the book concludes with a stimulating chapter on "The Hope for a New Individualism."

Much of the matter of this volume is so important, timely, and prophetic that it is a pity the author could not have couched it in terms and in a format which would have made it more acceptable to a general audience. Unfortunately the vocabulary is somewhat technical, the paragraphs and the pages are forbiddingly long and the book runs to 520 pages. It is to be hoped that Professor Allport will at some future time distill the essence of his real creative outlook into a popular book which will influence a wider public.

TURN YOUR IMAGINATION INTO MONEY.

By Ray Giles. New York: Harper, 1934,
205 pp., \$2.50

Since a special premium is placed on originality in these days of rapid change and keen competition, Mr. Giles aims to help people improve their imagination and cash in on their ideas. His book gives many concrete suggestions and is crowded with anecdotes and examples. Even though the reader may be irritated by such questionable statements as "superior intelligence usually goes with bashfulness," he cannot fail to be stimulated.

BECOMING A WRITER. By Dorothea Brande.

New York: Harcourt, Brace, 1934, 148
pp., \$2.00

Vocational counselor will find that *Becoming a Writer* is a good book to put in the hands of their many clients who express the ambition to earn their living by writing. A careful reading will turn away many whose ambitions are ill-advised. Those who are still determined on a writing career will find the book a practical and helpful guide.

THE SYSTEM OF BASIC ENGLISH. By C. K.

Ogden. New York: Harcourt, Brace,
1934, 320 pp., \$2.50

Basic English, that new international auxiliary language, is here systematically described and explained. This system of 850 English words and a few rules for their organization is easily learned and covers all the needs of everyday life. Basic English is no fad, but a scientifically worked out system which should gradually find wider acceptance.

CIVILIZED LIFE. By Knight Dunlap.

Baltimore: Williams & Wilkins, 1934, pp.,
\$4.00

Civilized Life is a revision and enlargement of the author's *Social Psychology*, first published in 1925. In this enlarged form it will serve as a highly informing and, in some parts, fascinating book for the intelligent general reader, or as a class text.

THE FOUNDATIONS OF PSYCHOLOGY. By

Jared Sparks Moore and Herbert Furnee.
Second Edition, Revised. Princeton:

Princeton Univ. Press, 1933, pp. xix, 287,
\$3.00

The twelve years which have elapsed since *The Foundation of Psychology* was first published, have necessitated a number of revisions in the second edition. Besides rewriting most of the sections dealing with Behaviorism, the authors have included Gestalt and Purposive Psychology in the present volume; and they have also brought their bibliography up to date. As it stands, *The Foundations of Psychology* will make a very suitable "academic" textbook, preferably for advanced students.

TEXTBOOK OF ABNORMAL PSYCHOLOGY. By

Roy M. Doreus and G. Wilson Shaffer.
Baltimore: Williams & Wilkins, 1934, 389
pp., \$4.00

The business executive comes into contact with few "abnormal" people, but a surprisingly large proportion of his workers are afflicted with conflicts, tensions, or unwarranted worries. While not obvious, these troubles decrease efficiency and make successful job adjustment difficult. The executive can probably gain a better understanding of these mental mechanisms through study of abnormal psychology than he can through the regular textbooks of general psychology. And the book being reviewed will serve admirably for this study. It is a concise review of what is known about the field of abnormal psychology. It is well-balanced, being swayed neither by the psychoanalytical nor the muscle-twitch physiological schools.

PLANNING YOUR FUTURE (2nd edition).

By G. E. Myers, M. Little, and S. A.
Robinson. New York: McGraw-Hill,
1934, 419 pp., \$1.50.

The first edition of this text, designed for use of junior high school students, has proved itself. In practice it has not only supplied information about the vocational world, but it has also been found to stimulate students' thought and interest. The present edition brings occupational census data up to date, takes into account changed conditions resulting from the economic crises, and incorporates new information resulting from recent governmental activities.

New Books

- AFTER THE SHUTDOWN. By Ewan Clague and others. New Haven: Yale Institute of Human Relations, 1934, 164 pp., \$2.00
- THE AMALGAMATED CLOTHING WORKERS OF AMERICA: A Study in Progressive Trade-Unionism. By Charles E. Zaretz. New York: Ancon, 1934, 306 pp., \$2.00
- ARBITRATION IN THE NEW INDUSTRIAL SOCIETY. By Frances A. Kellor. New York: McGraw-Hill, 1934, 266 pp., \$2.00
- THE COMING AMERICAN REVOLUTION. By George Henry Soule. New York: Macmillan, 1934, 324 pp., \$2.50
- DEVELOPMENTAL PSYCHOLOGY: An Introduction to the Study of Human Behavior. By Florence L. Goodenough. New York: Appleton-Century, 1934, 636 pp., \$3.00
- FAITH, FEAR AND FORTUNES. By Daniel Starch and Roger Barton. New York: Richard Smith, 226 pp., \$2.00
- HISTORICAL BASIS FOR UNEMPLOYMENT INSURANCE. By Industrial Relations Counselors, Inc. Minneapolis: University of Minnesota Press, 1934, 325 pp., \$3.00
- INDUSTRIAL RELATIONS IN THE UNITED STATES OF AMERICA. By H. A. Marquand. New York: Oxford, 1934, 114 pp., \$1.00
- LABOR UNDER THE NRA. By Carroll R. Daugherty. Boston: Houghton, 1934, 42 pp., \$.25
- MEASUREMENT IN RADIO. By Frederick H. Lumley. Columbus: Ohio State University, 1934, 325 pp., \$3.00
- ORGANIZATION AND SUPERVISION OF GUIDANCE IN PUBLIC EDUCATION. By Richard D. Allen. New York: Inor, 1934, 442 pp., \$3.65
- THE PLIGHT OF THE BITUMINOUS COAL MINER. By Homer L. Morris. Philadelphia: University of Pennsylvania Press, 1934, 267 pp., \$3.00
- THE SCIENCE OF WORK. By Morris S. Viteles. New York: Norton, 1934, 453 pp., \$3.75
- UNEMPLOYMENT AND RELIEF DOCUMENTS: A BIBLIOGRAPHY OF SOURCE MATERIALS. Compiled by the Document Section, University of Chicago Library. Chicago: Public Administration Service, 1934, 18 pp., \$.35
- VOCATIONAL GUIDANCE AND SUCCESS. 2nd Ed. By Edward J. Gallagher. Milwaukee: Bruce, 1934, 214 pp., \$1.20

Current Periodicals

PREPARED BY LINDA H. MORLEY, *Industrial Relations Counselors, Inc.*

EXECUTIVES

SCRIBNER, CHARLES S. Self-analysis for the executive. *N. O. M. A. Forum*, Feb., 1934, vol. 9, p. 12-14. (Abstract in *Management Review*, Apr., 1934, vol. 23, p. 111-112.)

Lists ten questions to be used in a personal survey.

HOURS OF WORK

VERNON, H. M. (M. D.; Investigator, Great Britain Industrial Health Research Board). Development of the two-shift system in Great Britain. *International Labour Review*, Feb., 1924, vol. 29, p. 165-180.

Examination of the methods and results of a two-shift system worked between the hours of 6 a.m. and 10 p.m., the average hours worked by each shift being reduced to about 41 per week. Effects on output, wages, labor turnover and the workers. Dr. Vernon recommends the system as offering a means of reducing hours of work which involves little or no reduction of wages, as not unacceptable to employers, and as suited alike to the present conditions of trade depression and to times of trade revival.

INCOME STATISTICS

KUZNETS, SIMON. National income, 1929-1932. *National Bureau of Economic Research Bulletin*, Jan. 26, 1934, no. 29, p. 1-10.

Results of a study made by the Department of Commerce in coöperation with the National Bureau of Economic Research. Figures are given for wages, salaries, dividends, interest and employment as well as income.

JOB ANALYSIS

DOOLEY, C. R. (Personnel Manager, Socony-Vacuum Corporation). Philosophy and procedure of a job analysis. *Personnel*, Feb. 1934, vol. 10, p. 67-71.

Detailed description of the plan used by the Socony-Vacuum Corporation.

LABOR PRODUCTIVITY

BOWDEN, WITT (U. S. Bureau of Labor-Statistics). Productivity, hours and compensation of railroad labor; part 3, transportation employees. *Monthly Labor Review*, Feb., 1934, vol. 38, p. 269-288.

Third in a series of articles, the first of which appeared in the December, 1933, issue, the second in the January, 1934, issue. Part one dealt with all employees and Part two with classes other than transportation employees. In most cases comparative data are given annually back to 1916.

NATIONAL INDUSTRIAL RECOVERY ACT

American Federation of Labor. Four labor problems. *American Federationist*, Mar., 1934, vol. 41, p. 268-278.

1. Representation of labor on the code authority.
2. Establishment of joint industrial relations boards.
3. Company unions and collective bargaining.
4. What is ahead for us in real wages.

These plans can best be described by quoting the foreword to each:

1. "The thesis of this memorandum is that a representative of labor should be on each Code Authority—certainly this is true of each important industry. His status on the Code Authority should be

such as to enable him to operate effectively. It is well known that nine-tenths of every law is its administration. The administration of the National Recovery Act will be worked out primarily through the codes; labor must be in a position to participate effectively in this administration."

2. "The thesis of this memorandum is that in perhaps a score of our largest industries Joint Industrial Relations Boards should be established. Such Boards already exist in several industries and of course the National Labor Board (Senator Wagner, chairman) serves the country as a whole. These Joint Industrial Relations Boards for particular industries would work in coöperation with, and not in conflict with, the National Labor Board."

3. "The purpose of this memorandum is to place before you in convenient form some of the more significant statements made recently (November, 1933) by the National Industrial Conference Board in its publication entitled *Individual and Collective Bargaining under the NRA, a Statistical Study of Present Practice.*"

4. "The thesis of this memorandum is simple and plain. There is ahead of us a very great danger to real wages. Unless our collective bargaining is strengthened by a prompt and large increase in organization, so that through collective bargaining money wages may be raised as fast as the value of the dollar declines, a lowered standard of living impends."

EVANS, MERCER G. (Emory University). Southern wage differentials under the NRA. *Southern Economic Journal*, Jan., 1934, vol. 1, p. 3-13.

A scholarly approach from the economist's point of view. In the main favorable to the New Deal policy.

OCCUPATIONS

CLARK, HAROLD F. Planning occupational distribution. *Occupations*, Feb., 1934, vol. 12, p. 18-26. (Abstract in *Management Review*, Apr., 1934, vol. 23, p. 114-115.)

The author proposes that each com-

munity plan the occupational distribution within its boundaries, these plans to be adjusted into larger state and national plans.

OFFICE WORKERS

EDWARDS, ALBA M. (Ph.D.; United States Bureau of the Census.) White collar workers. *Monthly Labor Review*, Mar., 1934, vol. 38, p. 501-505.

Facts drawn from an analysis of census data, showing the remarkable growth of this group during the 30 year period from 1900 to 1930 (from 7.5 to 16.3 per cent of the total gainful workers).

SMALL PLANTS

WATSON, W. F. Worker's point of view: XVI, the problem of the small shop. *Human Factor*, Mar., 1934, vol. 8, p. 101-111.

The author (a working mechanic of thirty years' experience) discusses the survival of the small engineering workshop in an era of mass production, and the reasons which enable shops of this kind, in spite of obsolete equipment and bad working conditions, to turn out good work at competitive prices. He describes his own experiences as an employee in small workshops and concludes that, in spite of rationalization, there will always be a place for the small firm, just as there will always be men who prefer the freedom and variety of work in such firms to work under far better physical conditions in a mass-production factory.

SOCIAL INSURANCE

American Association for Social Security. Federal and state social insurance bills. *Social Security*, Apr., 1934, vol. 8, p. 10-12.

A brief digest of the provisions of the various bills covering unemployment insurance, old age and social security in Congress and in sixteen states in 1934.

TESTS

VERNON, PHILIP E. Measurement of personality and temperament. *Human Factor*, Mar., 1934, vol. 8, p. 87-95.

The author points out the inherent difficulties in devising suitable tests to

use in such measurements and describes methods which he feels can be used.

UNEMPLOYMENT

KREPS, THEODORE J. Estimates of unemployment during the last four years. *Journal of the American Statistical Association*, Mar., 1934, vol. 29, Supplement, p. 81-85.

Description of a method of computation based on Bureau of Labor Statistics figures. A curve based on this method is shown in a chart along with curves for estimates by Col. Ayres and the A. F. of L.

UNEMPLOYMENT INSURANCE

GROVES, HAROLD M., AND ELIZABETH BRANDEIS (University of Wisconsin). Economic bases of the Wisconsin unemployment reserves act. *American Economic Review*, Mar., 1934, vol. 24, p. 38-52.

"Part of the cost of unemployment should be assessed to specific industrial concerns rather than to the community as a whole. Unless this be done the consumer is unable to choose low-cost products and concerns, since prices will not reflect all of the social costs. When social costs reasonably attributed to one producer are shifted to another, unfair competition results. Technological changes should carry their own costs, since decisions as to their practicability will be affected thereby.

"In answer to the charge that the Wisconsin Unemployment Reserve Act provides inadequate relief, it may be said that all labor legislation starts with inade-

quate protection, and a particular state can raise its standard as other states create or raise theirs. Even though the financial incentive to regularization under an unemployment reserve act may be small, it may be an effective stimulus to the psychology of business men. Moreover small incentives are frequently sufficient to change the balance in close decisions of business policy. Important achievements have been made in the prevention of unemployment, and a universal attack upon the problem might prove more proportionately effective."

SCHOELER, MARGUERITE. Collaboration between placing and unemployment insurance institutions. *International Labour Review*, Mar., 1934, vol. 29, p. 320-340.

An examination of the fundamental reasons for the necessity of collaboration between placing services and insurance systems, and of the conditions in which it can be most effective. A timely contribution to the discussion of a question which is of immediate interest today.

WORKMEN'S COMPENSATION

LEVINE, LOUIS (Ohio State University). Workmen's compensation experience in Ohio during the depression. *Journal of Political Economy*, Apr., 1934, vol. 42, p. 237-248.

The author's intention is to show the relationship between the problems of unemployment insurance and workmen's compensation insurance in order that the former may profit by the experience of the latter.

An Effective Revision of the Rating Technique

BY S. N. STEVENS AND E. F. WONDERLIC, *Northwestern University*

The research described in this article is further evidence of the healthy rebirth of efforts to appraise systematically the abilities and characteristics of employees.

The construction and development of a rating device which combines advantages of previous rating scales and eliminates many of the statistical sources of error, is described in this paper. Its use for a two year period in a business organization as a training as well as a predictive device, has furnished more than 1900 cases. A study of these indicates a consistency of rating by judges. Supporting data indicate that the "halo effect" and the acquaintanceship factor do not materially affect the judgments given by raters using this device. Furthermore, the most significant use for this rating scale is that of an analytical aid in training.

THIS paper discusses the construction and development of a rating scale which combines many of the advantages of earlier rating devices and coördinates them in a new and technically more accurate instrument.

During the years immediately following the World War, rating scales were used extensively in personnel work, but because of certain technical weaknesses, revealed in their low internal consistency, reliability, etc., they fell into general disuse. There is now a trend in personnel work to restudy the rating devices with the purpose of eliminating or reducing their weaknesses. This is evidenced by such recent work as that of Bradshaw (1), Richardson and Kuder (2), Slaght (3), Kelley (4), and others. The more technically accurate and scientific

rating scales are now finding new uses in personnel programs, as well as fulfilling more adequately the needs which led to the invention of the first.

We have introduced and are using in a large personal finance company, a rating device which combines many of the advantages of previous scales. It eliminates or reduces many of the sources of error found in other types of scale in general use today. The purpose of this scale is to help in understanding the individual's personality as a whole, in relation to the work the Company intends him to do, so that his development may be more effectively guided.

Much of the strength of our rating device lies in the fact that the opinions of the raters are based on standard well-defined trait descriptions. Each description is a definition of a complex of habits which are important factors

for success within the organization. It is titled only by number. These trait definitions were formulated only

cases rated on an ordinary rating blank calling for estimates on many phases of character and performance.

Rated by.....

TRAIT No. 1

Branch Office.....

Position.....

Date.....

READ THIS DESCRIPTION CAREFULLY

Some men are very industrious. They are prompt at work, persistent in solving their problems, careful of details and display that type of intelligent performance which gives the manager confidence in them, as dependable, thorough workers.

Other men are not so industrious. They do not display extreme interest or satisfaction in their work. They give up too easily on hard problems. They are careless of little things and cause the manager to feel uneasy. He is not sure that they have expended the utmost intelligent effort in the performance of their tasks.

In between these extremes are found varying degrees of work effectiveness. Please make your estimate of the men on what you have observed in working with them.

PLACE A CHECK (✓) ALONG THE LINE AT A POINT WHERE YOU THINK THE MAN ACTUALLY STANDS

1.	Name	Position	Has extremely valuable work habits.	Ordinary work habits.	Indifferent work habits.	Unable to observe
Give specific illustrations of behavior on which your judgment is based.						
2.	Name	Position	Has extremely valuable work habits.	Ordinary work habits.	Indifferent work habits.	Unable to observe
Give specific illustrations of behavior on which your judgment is based.						
3.	Name	Position	Has extremely valuable work habits.	Ordinary work habits.	Indifferent work habits.	Unable to observe
Give specific illustrations of behavior on which your judgment is based.						
4.	Name	Position	Has extremely valuable work habits.	Ordinary work habits.	Indifferent work habits.	Unable to observe
Give specific illustrations of behavior on which your judgment is based.						
5.	Name	Position	Has extremely valuable work habits.	Ordinary work habits.	Indifferent work habits.	Unable to observe
Give specific illustrations of behavior on which your judgment is based.						
6.	Name	Position	Has extremely valuable work habits.	Ordinary work habits.	Indifferent work habits.	Unable to observe
Give specific illustrations of behavior on which your judgment is based.						
7.	Name	Position	Has extremely valuable work habits.	Ordinary work habits.	Indifferent work habits.	Unable to observe
Give specific illustrations of behavior on which your judgment is based.						

after detailed job analysis had been carried out. This involved several hundred individual interviews, as well as a study of more than seven hundred

Seven traits are used to complete the entire scale. Five of these are specific trait patterns, which might fall under such general headings as: work

habits, verbal facility, originality, social adaptability, leadership. The remaining two are traits which aim to

If our definitions of the specific and general traits are correct, a high positive relationship should exist between

Rated by.....

TRAIT No. 6

Branch Office.....

Position.....

Date.....

READ THIS DESCRIPTION CAREFULLY

Some men are of considerable value to the organization as a whole. They contribute many worthwhile ideas, as well as a great amount of time and effort. The quality as well as the amount of work they do is excellent. They despatch their work in a prompt orderly fashion and set records of achievement that are hard to equal.

Others have a poor working knowledge of the business as a whole and its relation to other things. They need constant prodding and follow-up in order to produce for the company. They never become a smooth running part of the organization.

The men you are judging fall somewhere between these extremes. Consider these men in terms of what they have already contributed to the company.

PLACE A CHECK (✓) ALONG THE LINE AT A POINT WHERE YOU THINK THE MAN ACTUALLY STANDS

1.	Name	Position	Not an outstanding asset to the company.	Average value.	Extremely valuable to the company.
	Give specific illustrations of behavior on which your judgment is based.		Unable to observe		
2.	Name	Position	Not an outstanding asset to the company.	Average value.	Extremely valuable to the company.
	Give specific illustrations* of behavior on which your judgment is based.		Unable to observe		
3.	Name	Position	Not an outstanding asset to the company.	Average value.	Extremely valuable to the company.
	Give specific illustrations of behavior on which your judgment is based.		Unable to observe		
4.	Name	Position	Not an outstanding asset to the company.	Average value.	Extremely valuable to the company.
	Give specific illustrations of behavior on which your judgment is based.		Unable to observe		
5.	Name	Position	Not an outstanding asset to the company.	Average value.	Extremely valuable to the company.
	Give specific illustrations of behavior on which your judgment is based.		Unable to observe		
6.	Name	Position	Not an outstanding asset to the company.	Average value.	Extremely valuable to the company.
	Give specific illustrations of behavior on which your judgment is based.		Unable to observe		
7.	Name	Position	Not an outstanding asset to the company.	Average value.	Extremely valuable to the company.
	Give specific illustrations of behavior on which your judgment is based.		Unable to observe		

give a general estimate of the individual from the point of view of present general ability and value to the Company, and capacity for development.

the separate traits and the two general traits, labeled 5 and 6, as is shown in tables 3, 4, and 5. The specific traits labeled 1, 2, 3, 4, and 7 correlate highly

with general traits 5 and 6, as well as with the average of all traits. Using this arrangement of trait descriptions, we are able to formulate a general average rating which involves opinion on the most important specific abilities, as well as general traits. The sheets used for rating traits 1 and 6 are reproduced here.

When the scales are presented to the raters, each trait is on a separate sheet. The trait description, at the top of the page, pictures vividly the extremes of each habit-pattern to be measured. Below this description are listed in random order the names of all men who are to be rated by the judge. This order may be shifted on future ratings. The rater checks the graphic scale, which is found opposite the individual's name. This gives an objective measure to his estimate, since the bar is broken by small lines into centimetre intervals. These points are purposely made small, implying that there can be no genuine intervals in the traits measured. The bar itself is slightly longer than ten centimetres, indicating that it is practically impossible to reach perfection on any one trait. These two points aid the rater in visualizing the fact that the black line represents the entire range of possible achievement in any given trait.

Below this measuring line, spaced at regular intervals, are three short qualifying phrases coinciding with and reinforcing the trait description itself. The favorable extremes of the scale are shifted from left to right on alternate traits. Typical illustrations of behavior, which support the rating assigned to each individual, are to be written

in the remaining space. The following are examples of illustrations we have received from various raters.

Trait 1

A. "He is very prompt, very industrious, but somewhat lax in detail."

B. "Fair worker, inclined to slump—must be urged to get any volume of work—only fair as to quality."

Trait 2

A. "A little better than ordinary, has ability to convince people but is lacking in vocabulary."

B. "Too forceful in expression at times. Enunciation and word choice only fair. Resorts to swearing for emphasis at times."

Trait 3

A. "Rather mechanically minded in many respects. However, has ability to deal with unusual conditions."

B. "Has ideas, very creative, always wanting to try something different and new."

Trait 4

A. "Easily aroused to anger. Gets worked up often over petty things. Draws too consistently on what should be his reserve energy."

B. "Customers go to him for advice, has made friends out of enemies outside of the business."

Trait 5

A. "Capable of doing much better than ordinary work. Can profit by experience. Ready to grasp new ideas. Should develop much further."

B. "Has promise if he can broaden his viewpoint and acquire better general knowledge."

Trait 6

A. "Puts out an average quantity of work. Quality above average. Understands his business."

B. "A clock watcher, quantity of work below average."

Each of the seven traits has been individually defined, organized and presented on a separate sheet as described above. In order to collect an individual's ratings from the seven trait sheets, a rating control chart is used by the staff of the Personnel Department. On this sheet, which is used only as a record, are listed the

TABLE 1

Comparisons of supervisors' ratings of managers after six month intervals (same raters)

TRAIT NUMBER	1ST AND 2ND RATINGS; OCT. AND MAR.		2ND AND 3RD RATINGS; MAR. AND SEPT.	
	r	N	r	N
Ave.	.64	109*	.71	89*
1 S	.54	109	.71	89
2 S	.72	109	.64	89
3 S	.64	109	.58	89
4 S	.57	109	.54	89
5 G	.54	109	.67	89
6 G	.60	109	.59	89
7 S	.51	109	.66	84

* P.E. varies from $\pm .033$ to $\pm .047$. S = Specific. G = General.

seven traits and illustrations given by the rater.

This device has proved extremely useful as a training instrument. Since it is used semi-annually, it presents an opportunity for the raters, who are the managers and supervisors in our organization, to have a frank and open discussion with each man in regard to basic weaknesses as well as good points in his work performance and general progress. By building the discussion around the trait description, it is easy for the teacher to train his men in an objective fashion and criticize past performance in a positive manner.

When this has been done intelligently and sympathetically, the men have benefited. In many instances managers have found it to their advantage to have these forms framed and hung in their offices so that they might have these ideas in front of them when talking to their men. Those who have used this rating device report that it is an effective tool in that delicate task

TABLE 2

Comparisons of managers' ratings of men under them after six month intervals (same raters)

TRAIT NUMBER	1ST AND 2ND RATINGS; OCT. AND MAR.		2ND AND 3RD RATINGS; MAR. AND SEPT.	
	r	N	r	N
Ave.	.57	237*	.62	301*
1 S	.48	237	.79	297
2 S	.52	237	.64	295
3 S	.63	237	.58	293
4 G	.48	235	.72	295
5 G	.64	236	.62	295
6 G	.50	232	.58	289

* P.E. varies from $\pm .013$ to $\pm .033$. S = Specific. G = General.

of improving efficiency and morale. In addition, the raters have improved their own judgment in handling men.

As these ratings accumulate, they become important quantitative measures of an individual's progress. They have greatly aided the Personnel Department in making judgments and recommendations for promotion or dismissal, as well as specific suggestions for better handling and training of various employees.

Since this scale has been in use for the last three rating periods, we have been able to make two independent comparisons which seem to demon-

strate its constancy. In tables 1 and 2, we have listed the Pearson coefficient of correlation, showing the relationship between the ratings of the same individuals made by the same judges, after a six months' interval. The size of these coefficients seems to show a high constancy of judgment. It should be pointed out that, during a six months' depression-period interval, survival of industry's fittest has in each case

of time. There are eight to ten managers under each traveling supervisor. In turn, managers periodically rate all the men under them. There are from two to eight men under a branch manager. In all cases ratings are made without reference to previous estimates. The work of all the men in the branch office is the same, and in general the same habit-patterns are involved in the work processes.

TABLE 3
First order correlations between managers' ratings of traits of men under them
(March ratings; N = 511*)

	TRAIT NUMBER					
	1S	2S	3S	4S	5G	6G
Ave.	.88	.68	.80	.79	.81	.96
1 S		.49	.72	.61	.69	.82
2 S			.56	.54	.56	.62
3 S				.56	.75	.80
4 S					.77	.77
5 G						.90

Partial coefficients

$r_{12.6} = -.03$	$r_{23.6} = +.15$	$r_{34.6} = -.14$
$r_{13.6} = +.18$	$r_{24.6} = +.12$	
$r_{14.6} = -.02$		

* P.E. varies from $\pm .003$ to $\pm .02$.

narrowed the range of the first array of ratings. This fact in itself would decrease the standard deviation of the series and, in turn, would have some unmeasured effect upon the magnitude of these correlation ratios. The difference between the first and second sets of coefficients indicates a greater constancy with the continued use of these rating scales.
This rating scale is used periodically by the traveling supervisors, who rate the managers under them—men they have known for a considerable length

In tables 3, 4, and 5 are presented the Pearson coefficient of correlation between the various individual traits as well as the general average of all traits used. A test indicates that the regression of one trait upon another is linear. The coefficients between the separate traits and the general average are sufficiently large to indicate a reliable degree of homogeneity of the scale. As would be expected, the correlation coefficient between the general traits (Nos. 5 and 6) ranks highest with the general average in each of the three

groups of rating studies. The fact that each trait definition is a separate, specific traits, Nos. 1, 2, 3, 4, and 7, and each other. Further, that there are

TABLE 4
First order correlations between supervisors' ratings of traits of managers
(March ratings; N = 144*)

	TRAIT NUMBER						
	1S	2S	3S	4S	5G	6G	7S
Ave.	.80	.78	.85	.79	.91	.92	.90
1 S		.64	.68	.73	.72	.72	.71
2 S			.66	.62	.84	.64	.65
3 S				.62	.80	.81	.75
4 S					.75	.76	.76
5 G						.83	.81
6 G							.87

Partial coefficients

$r_{12.6} = +.34$	$r_{23.6} = +.32$	$r_{34.6} = +.01$	$r_{47.6} = +.29$
$r_{13.6} = +.25$	$r_{24.6} = +.27$	$r_{37.6} = +.17$	
$r_{14.6} = +.39$	$r_{25.6} = +.25$		
$r_{17.6} = +.26$			

* P.E. varies from $\pm .007$ to $\pm .03$.

TABLE 5
First order correlations between individual traits, managers' ratings of men under them
(October ratings; N = 492*)

	TRAIT NUMBER					
	1S	2S	3S	4S	5G	6G
Ave.	.78	.78	.83	.79	.89	.88
1 S		.62	.66	.62	.66	.71
2 S			.63	.59	.69	.66
3 S				.56	.75	.73
4 S					.68	.70
5 G						.83

Partial coefficients

$r_{12.6} = +.28$	$r_{23.6} = +.29$	$r_{34.6} = +.11$
$r_{13.6} = +.30$	$r_{24.6} = +.24$	
$r_{14.6} = +.25$		

* P.E. varies from $\pm .006$ to $\pm .02$.

yet somewhat overlapping, habit-complex is supported by the magnitude of the correlation ratios between the

important specific items in the general habit patterns of the individuals in the organization is suggested by the

magnitude of the coefficient between each specific trait and the general traits, Nos. 5 and 6.

The first order coefficients of correlation between the specific traits range from $+ .49$ to $+ .72$, as is shown in the tables 3, 4, and 5. Much of this apparent relationship is due to the fact that these specific habit-patterns unite to form the general habit-pattern. Partial correlations between these specific traits and each other, when the general trait (No. 6) was held constant, indicate that the net relationship between any two of the specific traits is not of great importance. The partial coefficients vary from $- .14$ to $+ .39$. Considering these findings, then, the size of these correlation ratios seems to indicate that the so-called "halo-effect" has been materially reduced by this scale. There is an obvious "halo" between traits 5 and 6—the general traits. There is a natural "halo" between the individual specific traits and either of the general traits. The shift in the size of the coefficients from one sample to another would further suggest that the "halo-effect" is not an important factor affecting these quantitative measures, and is not playing a constant rôle. The partial correlations suggest that the "halo-effect" may be either a positive or negative influence, but is most often positive.

The entire range of the scale has been used by judges on each occasion, checks having been found in every one of the ten segments in the graphic scale. Because industry cannot support the grossly inefficient, those who are rated or would have been rated extremely low do not remain in the

organization. This natural elimination, as well as a controlled selection procedure, tends to skew the distribution toward the high end of the scale. Every business organization becomes homogeneous, and, contrary to the opinion of Freyd (5), T. L. Kelley (6), and Paterson (7), we do not feel that such a scale as this, used in any industry or business, should yield a normal distribution. It would follow that any correction procedure, used to give a normal distribution in the array of such ratings as these, is not statistically sound. The distribution may be slightly skewed due to generosity, but certainly much of it is due to the fact that our sampling is a homogeneous group.

The average coefficient of correlation (η) between months of acquaintanceship and ratings on six traits is $.168 \pm .018$. This was obtained by classifying 519 estimates given by 141 judges. The low coefficient indicates that length of acquaintanceship does not significantly affect ratings of this type. There is no definite tendency for old employees to rate higher on this scale than new employees. Both Knight (8) and Shen (9), using a much simpler scale, found that acquaintanceship was a factor affecting personal judgments.

The coefficients of correlation shown in tables 1 and 2 do not support the opinion of Rugg (10), Watson (11), and Slawson (12) to the effect that "general all around value" is frequently more reliably rated than are the more specific qualities." In only one sampling does the coefficient on a general trait (Nos. 5 or 6) outrank any of the specific traits. This study sug-

gests that specific traits may be measured as reliably as general traits.

When used correctly, such a rating device as this takes considerable time and effort on the part of those giving their estimates. Raters usually spend three or more hours filling in these forms. In many ways this is a disadvantage but, since it forces an objective, constructive analysis of the office staff the time is well spent.

Continued use of this rating scale makes the following advantages apparent:

1. The rater must compare all the men he is rating on the same trait at the same time.
2. The rater must think of all men in the light of their specific work habits as well as general performance. This makes him aware of the individual's good points as well as his weaknesses.
3. A definite description of a scale-man at the extremes of the behavior pattern gives the scale many of the advantages of the man-to-man rating technique.
4. There is a flexibility in the use of the traits to be rated—i.e., if the group to be rated does not have the opportunity to display leadership, for example, that particular trait can be omitted.
5. The supporting illustrations of behavior given by the judges are useful in interpreting individual performance. As illustrations from progressive ratings are received pertinent and diagnostic information collects in the individual's portfolio.
6. This method of rating proves of value as a training procedure since it points out to their immediate superior the definite characteristics of the men considered. The men who are rated benefit, individually, since at the time of rating most managers discuss the report with their men.
7. This scale combines the major advantages of the graphic rating method, the man-to-man method, and the linear method, as well as the order of merit scale.
8. The "halo-effect" is reduced to a point where it is not a significant factor affecting the estimates of the raters.
9. Length of acquaintanceship does not particularly affect this type of rating.
10. A final advantage of this rating technique is that, with continuous use, it becomes an extremely valuable source of data for personnel research, since it is an objective criterion of success.

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A Clinical Approach to Foremanship

BY CARROLL LEONARD SHARTLE, *Michigan State College*¹

A group of successful foremen and a group of workers with job skill equal to that of the foremen, but considered incapable of supervising others, were clinically studied. Combined interview and interest questionnaire scores differentiated the two groups without overlapping. From the case histories, the foremen showed a development from early childhood involving less withdrawal from others, less indifference to the actions of others, and fewer antagonistic reactions toward others. In many cases there was a close relationship between reported childhood behavior and present job behavior. Clinical information would seem valuable in selecting foremen and in scientifically matching workers with superiors in order to avoid conflict.

WHAT is the psychological makeup of a good foreman? How does he differ in background and present behavior from the regular worker of equal job skill? What psychological factors may account for the fact that one man can handle others successfully and another fails at the task? Previous studies have applied tests or have merely set up qualifications based on direct or indirect personal observation. The aim of the present investigation was to go more deeply into the problem, utilizing the best available clinical techniques.

Two groups of employees in a utility were given clinical study. The first group consisted of successful foremen; individuals who had survived reductions in personnel and who had worked out successfully under various execu-

tives. The second group was made up of workers with job skill approximately equal to that of the foremen, but considered by two judges, after careful observation, as not able to supervise others. Many members of this latter group had been tried out unsuccessfully in a supervisory capacity.

Two devices were applied to obtain information concerning the two groups: a detailed clinical interview and the Strong Vocational Interest Blank. In the interview special emphasis was placed on observed social behavior and the developmental history of each individual. A partial list of items covered is as follows:

Family background: Occupations of parents and siblings, nationality of parents, favorite parent and favorite sibling, most disliked sibling, age rank in family, other persons living in the home, financial, educational and social standing of the family, discipline in the home, religion in the home, quarrels, and family catastrophes.

¹ The writer is indebted to Professor Harold E. Burt of The Ohio State University for his helpful guidance in making this study.

Personal history: Health, type of play liked best and type of play liked least, early associates, attitude toward others, emotional disturbances, school progress, attitude toward discipline of parents and teachers, and occupational interests; also marital and economic status, and type of recreation in adult life.

Appearance in interview: Dress, movements, speech, poise, and other observations.

Methods of handling men: Foremen were asked for the methods they had found most useful in dealing with subordinates. Workers were asked for their preferences regarding the methods applied to them by the foremen in regard to methods of giving orders, methods of correction, use of praise and criticism, amount of interest the foreman should show in the personal, financial, and home affairs of the men, and the worst and best acts a foreman could do. Workers also gave their preferences for the age, number of years experience, and nationality that a foreman should have.

In all cases where a preference or an attitude was given by an employee, the reasons for his decision were solicited. These reasons were frequently of great importance in obtaining the individual clinical picture.

The Strong Vocational Interest Blank was administered to discover possible differences in interests between the two groups and to serve as an aid in opening the interview.²

Care was taken to establish good rapport. Each employee was clearly

informed that the interviewer was in no way connected with the company in question and that any information given would be kept confidential. Also each subject was told that the interest blank and the interview were given merely to discover how the interests and back-grounds of utility employees differed from other occupational groups. In approaching the preferred methods for handling men, however, the employee was informed that the interviewer was interested in foremanship and would like any ideas the men had concerning it.

The foremen were interviewed in their own private offices where possible, and the remainder of the subjects in quiet offices or small rooms with which they were familiar. Each study was completed in one sitting ranging from one and one-half to three hours.

Twenty-three foremen and twenty-five workers were studied. The findings were treated both quantitatively and qualitatively.

QUANTITATIVE RESULTS

In treating the data quantitatively the aim was to find what significant differences in responses existed between the foremen and non-foremen. Hence, the frequency was found for each group on the 1260 possible responses in the vocational interest blank and the approximately 200 possible responses in the interview. The standard error of the difference and the critical ratio were computed for each of the 1460 responses. Weights were assigned to the items in whole numbers approximating the critical ratio. Items with critical ratios less than .5 were dis-

² S. M. Shellow. Vocational interest as an aid to interviewing. *Personnel Journal*, 1930, 9, 379-384.

carded. Although a critical ratio of .5 indicates only 68 chances in 100 that the difference is a real one, it was found that when several items with low critical ratios were grouped together the significance of their total justified their inclusion.

Twenty-four items in the interview were given weights in this manner. Conditions found more frequently among the foremen with critical ratios greater than 2.0 were as follows:

- Father foreign born.
- Mother foreign born.
- Age over 40.
- Good attitude toward early associates.
- More than 20 years experience in the Company.
- Selling experience before entering the Company.
- Ownership of home at present time.

Similarly items found more frequently among the non-foremen were:

- Restless movements in interview.
- Other persons living in the home during childhood or adolescence. (Grandparents, stepparents, etc.)
- Repetition of one or more subjects in school.
- Self-conscious appearance in interview.
- Tense or strained facial expression in interview.
- Low intensity of voice during interview.

The total scores made by the subjects on the selected interview items were computed, plotted, and an arbitrary critical score selected graphically. Ninety-one per cent of the foremen were above this score and 72 per cent of the non-foremen below it.

The foremen, in reporting their best methods for handling subordinates, tended not to advocate the stricter methods but to practice suggestion, to give praise for a good job and to con-

sider individual differences. On the other hand, 28 per cent of the workers interviewed preferred a command to a suggestion when being given instructions; and 24 per cent preferred the foreman to use "you" rather than "we" in conversing about a job. There was a strong feeling among about half the men that home and financial affairs were none of the foreman's business, but that he might be of some help in an emergency.

Ninety-six per cent preferred to be corrected in private rather than in front of others, but only 52 per cent preferred indirect correction in which it is suggested that something might be wrong, and the worker is given a chance to find and correct his own error.

Forty-eight per cent of the workers believed punishment such as layoffs and demotions to be a good thing. Twenty per cent of them preferred criticism to praise or to equal amounts of praise and criticism. Sixty-four per cent reported they liked lots of responsibility.

The majority of the workers preferred the foreman be near their own age, have more experience in the company than they, and be an American rather than foreign born.

Thirty-two per cent considered praise for a good job to be the one best action on the part of a foreman, while 28 per cent felt the one worst thing a foreman could do was to reprimand in the presence of others.

Those workers who preferred being commanded did so because they thought they could understand the instructions better. Three employees enjoyed having a boss who was stern.

Those who preferred considerable responsibility to close supervision gave as reasons either that they felt confident of the job or that having the foreman watching made them uneasy.

These results indicate the importance of taking into account individual differences when handling others. One man enjoys the sting of a command, another rebels against it, and a third becomes afraid.

The items in the Strong Vocational Interest Blank were given weights and the total scores calculated as in the interview. One hundred per cent of the foremen were above the critical score and 100 per cent of the non-foremen

were below it. The supervising foremen and the superintendent in charge of the men indicated in narrative form their reactions regarding the ability and special peculiarities of each foreman and also gave their reasons for believing why each of the workers was not foreman material. The interview material was then compared with the information from the superiors.

All of the foremen who were rated as rather strict with the men were reared in homes where strict discipline prevailed. Three of the four foremen considered too lenient with the men came from homes of medium discipline.

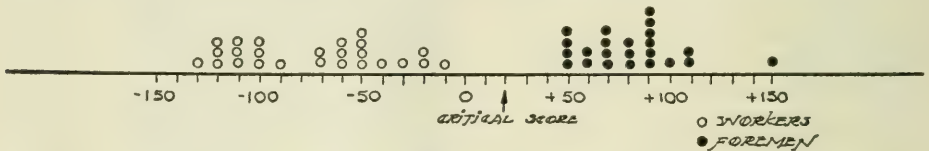


FIG. 1. PLOT OF COMBINED INTERVIEW AND QUESTIONNAIRE SCORES

The foremen scores all fall above the critical score, and the workers' scores below this point.

below it. In general the responses on the interest questionnaire suggested that the foreman had greater interest and self-confidence in activities dealing with people.

The interview and the interest blank scores were combined and plotted. Figure 1 shows the arrangement of scores by which the foremen are completely differentiated from the non-foremen.

QUALITATIVE RESULTS

In addition to the quantitative material secured in the above fashion, each interview was considered as a separate case and the qualitative fac-

Eleven of the workers were considered too "easy going" to be trusted with handling men. In the case histories these men appeared indifferent or completely subordinated to home discipline and several reported shyness in childhood.

Four of the workers were thought by the raters to be apt to antagonize others. Their case studies showed a general tendency to resent discipline and display anger responses in childhood.

In general the foremen as a group showed a development involving less withdrawal from others, less indifference to the actions of others, and fewer antagonistic reactions toward others.

CONCLUSIONS

A clinical picture of the foreman or worker will often give valuable information as to his probable job behavior. Since there is a wide variety of preferences by the workers as to the methods used on them by the foremen, it would seem advisable to match scientifically the foreman with his subordinates, giving to the strict foremen

the men who prefer strictness. Clinical information would seem valuable at the time of employment for selecting possible supervisory material and for appropriate matching of foremen and subordinates. Obtaining this information would, of course, require an interviewer of considerably better training than is needed for ordinary selection work.

Fatigue

How Does It Affect the Quantity and the Quality of Muscular Work

BY CHARLES W. MANZER, *New York University*

After analysis of laboratory work curves, Dr. Manzer finds that fatigue not only decreases the capacity to do work; it increases enormously the irregularity of such work as is done. This irregularity results in spoiled and otherwise unsatisfactory output. All findings point to this important principle: rest should come before, not after, fatigue has developed.

THE purpose of this article is to present the results of some recent experiments concerning the effect of fatigue on the quantity and the quality of muscular work. The fact that work performed with fatigued muscles is wasteful has been established both through industrial experience and by scientific studies. Since work necessarily involves the use of muscles, whether it be operating a lathe or a typewriter, whether it be described as physical or mental, it follows that the effects of muscular fatigue upon human work are far-reaching. The effect of fatigue on work and its converse, the recovery effect of rest, have been studied both in the industrial plant and in the laboratory. The relationship between these two approaches to the problem of fatigue, the industrial and the experimental, has been clearly pointed out by Viteles, who says that "fatigue impairs man's working power in the industrial plant in the same way as it interferes with

the activity of a single muscle in the laboratory situation."¹ In the laboratory, the investigator examines in isolation the same factors that operate in the industrial situation as a complex system.

In experiments² conducted in the psychological laboratory of New York University, using the Mosso ergograph, it has been found that the work done by the flexor muscles of the middle finger as these muscles approach complete exhaustion is only one-fifth the output of the same muscles when rested. Use of fatigued muscles results in a waste of eighty per cent. With respect to the quality of the work, as indicated by regularity or variability, these experiments have shown that work performed with fa-

¹ Morris Viteles, *Industrial Psychology*, Norton and Company, 1932, p. 446.

² Charles W. Manzer, The Effect of Fatigue upon Variability of Output in Muscular Work. *J. Exper. Psychol.*, 1934, 17, 257-269.

tigued muscles is over three times as variable or irregular as that performed with unfatigued muscles.

For the purpose of making a more detailed comparison between work done with fatigued muscles and that done with rested muscles, further analysis has been made of some of the work curves made in the experiments referred to above. The present analysis has attempted to answer two questions: First, how does fatigue affect output and variability throughout the entire course of a work period, when the work is continued to exhaustion? Second, how does such work compare with the work done by the same groups of muscles working under the same conditions, but allowed rest pauses for recovery after exhaustion?

The work curves selected for answering the first question consisted of all those which contained fifty contractions. Out of a total of two hundred ninety-seven, there were fifteen such curves, each performed by a different person. These work curves were divided for purposes of analysis into five parts of ten contractions each. The mean, the standard deviation and the coefficient of variation were found for each of the five parts for all subjects combined; that is to say, the first part of the work curves of all subjects was considered as one unit of work, the second part of the work curves of all subjects was considered as a second unit of work, and so on. The five parts, therefore, made it possible to ascertain the change in average output and in variability of work throughout the entire work curve. Control work which would serve as a basis for comparison consisted of the first ten con-

tractions of five successive work periods performed by the same fifteen subjects. The work in each period was continued to exhaustion, but a five-minute rest pause separated successive work periods.

The mean, the standard deviation and the coefficient of variation of each of the five parts of the continuous work and also the corresponding measures of the five parts of work performed with rested muscles are presented in Table 1. It will be seen in Table 1 that the work done with fatigued muscles shows a rapid decrement. The mean output which is 24.98³ in the first part, falls to 12.69 in the middle and drops to 3.85 in the last part. The increase in variability is shown by the coefficients of variation of the same three parts, 19.46, 47.52, and 70.39, respectively. On the other hand, the work performed with rested muscles shows only a moderate decrement, as would be expected, since each work period was continued to exhaustion. The mean output, shown in Table 1, falls from 25.40 in the first fifth of the first work period to 16.64 in the first fifth of the last work period. Likewise, the corresponding coefficients of variation increase from 21.46 to 30.47. The foregoing figures furnish a basis for answering the first of the two questions stated above. Fatigue, under laboratory conditions, results in an enormous decrease in the capacity to do work; it also results in a great increase in the variability of such work as is done.

In the present discussion it has been

³These measures of mean output are twentieths of an inch through which a ten-pound weight was raised.

assumed that a reasonable amount of fatigue during work is that found in the control conditions, that is to say, in a series of work periods with rest pauses located between successive periods. On the basis of this assumption, the means and the coefficients of variation

percentage of the corresponding mean and coefficient of variation of the work performed with rested muscles. These percentages are presented in Table 2.

It will be seen in Table 2 that the mean output of work under the two conditions, fatigued and rested, start

TABLE 1

The average output and the variability of work performed with fatigued and with rested muscles
Work Performed with Fatigued Muscles

	SUCCESSIVE FIFTHS OF THE SAME WORK PERIOD				
	15	15	15	15	15
Number of subjects.....					
Mean.....	24.98	19.75	12.69	7.35	3.85
Standard Deviation.....	4.86	5.41	6.03	4.45	2.71
Coeff. of Variation.....	19.46	27.34	47.52	60.54	70.39

Work Performed with Rested Muscles

	FIRST FIFTHS OF FIVE SUCCESSIVE WORK PERIODS				
	15	15	15	15	15
Number of subjects.....					
Mean.....	25.40	23.01	19.76	17.45	16.64
Standard Deviation.....	5.45	5.32	6.15	6.04	5.07
Coeff. of Variation.....	21.46	23.12	31.12	34.61	30.47

Note: The means and standard deviations in this table are twentieths of an inch through which a ten-pound weight was raised.

TABLE 2

Averages and coefficients of variation of work performed with fatigued muscles expressed as a percentage of the averages and coefficients of variation of work performed with rested muscles

	FIFTHS OF WORK PERIOD				
	98	86	64	42	23
Mean.....	91	118	153	175	231
Coeff. of Variation.....					

of the work performed with fatigued muscles have been compared with the corresponding statistical measures of the work performed with rested muscles. This comparison has been made by expressing the means and the coefficients of variation of the work performed with fatigued muscles as a

from practically the same level. In the fifth part, however, the mean output of fatigued muscles is only 23 per cent of the output of the same muscles working under rested conditions. Likewise, the irregularity or variability of work performed with fatigued muscles rises from 91 per cent

to 231 per cent. On the basis of these percentages, the answer to the second question may now be stated as follows: Work performed with fatigued muscles, under these laboratory conditions, quickly falls to less than a quarter of the work performed with rested muscles. There is also an accompanying rapid increase in the irregularity or variability of the work done with fatigued muscles.

What are the implications of these laboratory experiments for industry? In the industrial situation, output means production and variability fre-

quently means unsatisfactory or spoiled work. These experiments indicate that the production of a fatigued worker is far below that of the same worker when he is rested. Further, the production of a fatigued worker, since it is more variable or irregular, is more likely to be uneven or unsatisfactory in quality. It follows, therefore, that if the quantity and the quality of work is to be maintained at a satisfactory level, extreme muscular fatigue in the worker must be avoided. Rest should come before, not after, fatigue has developed.

The Prestige of Occupations

A Comparison of Educational Occupations and Others

BY GEORGE W. HARTMANN, *Pennsylvania State College*¹

Dr. Hartmann demonstrates the presence of a definite and widely accepted hierarchy of occupations according to the amount of prestige attached to them. Not only that, he finds that most people have a clear idea of how high or low their occupation is rated by others. It is worth while to compare this classification of occupations with that arrived at by Dr. Hildreth in the next article, "Occupational Status and Intelligence."

Four hundred and fifty persons, engaged in diverse careers and living in various localities, arranged twenty-five representative occupations in the order of their respect and admiration for them. The relative positions derived from large and small communities, agricultural and industrial regions, were strikingly consistent. The professions stood at the top of the prestige hierarchy and the "labor" groups near the bottom. Class-consciousness or occupational "insight" was measured by the closeness of agreement between the status assigned to a career by persons within it and that conferred by disinterested outsiders. Most occupations gave only a slightly higher rank to themselves than that granted by others. In all groups, the physician uniformly stood first. A definite order of merit within the teaching profession was also revealed, thus: college professor, school superintendent, principal, high-school teacher, elementary-school teacher.

A NUMBER of writers have called attention to the ambivalent social position of the typical public school teacher of our times. On the one hand, the teacher represents a group well above the average citizen in intelligence, culture, and socially desirable conduct—qualities which normally ensure a high "rating" when

possessed by members of other classes. Along with this, however, goes a reputation for economic incompetence, personal futility, and inadequacy in community affairs. Thus, Waller in his *Sociology of Teaching* holds that the poor opinion which the adults of most school districts have for the ordinary school teacher is the source of many of the emotional conflicts from which she is said to suffer. Similarly, Benson² claims that this is true of

¹ The writer wishes to acknowledge the assistance rendered in the field study portion of this report by three collaborators, Messrs. Singleton, Waterbury, and Hermansen.

² C. E. Benson, *Mental Hygiene and the Teacher*, *The Clearing House*, 1932, 7, 6-11.

all ranks of the teaching career from kindergarten supervisor to university professor. "Social stigma is assuredly attached to the teaching profession whether we are willing to accept the fact or not. We read of the college professor, highly respected in his own group, who fails to make desirable social contacts outside of his group." Indirectly, this fact is acknowledged by a high school teacher in a testimonial explaining why he belongs to the American Federation of Teachers, "Only through the Union can teachers attain a position of respect in the community, instead of one where they are subject either to contempt or to hypocritical praise."

A pretty problem in social psychology is posed by this odd situation. In many respects, the status of the teaching class is very similar to that of the clergy, to whom they bear historical affiliations. The attitude of many people toward the ministry or priesthood is undoubtedly one of superficial respect for their obvious incarnation of conventional virtues, but at the same time one of discomfort and irritation (with subsequent latent hostility) in their presence. Perhaps the mental mechanism involved is that we resent the appearance of any one who, wittingly or not, makes us feel inferior; the disparagement of such a person which ordinarily ensues is simply a "face-saving" device for redressing the balance. Such *ambivalence* of response toward school teachers is readily traceable to the fact that she is the source of *both* praise and blame, or reward and punishment, exerted within a limited field of authority. The public reacts similarly to army officers, "politicians," policemen, and customs officials.

The alleged social inferiority of the school teacher is somewhat more difficult to understand, particularly in view of the unusually heavy annual influx of new students into the normal schools and teacher-training institutions of the country. Since the onset of the current depression, the efforts of numerous engineers and other technical men, as well as of pre-legal and pre-medical candidates, to qualify for teaching certificates have been so pronounced as to embarrass the administrative officials of schools of education. While it may be argued that the individuals referred to were motivated by a case of *faut de mieux*, the fact is nevertheless inconsistent with the assumption of the inferior social status of teachers. Competent people do not strive so desperately to gain admission to a field which bears the stamp of public disapproval.

Considerations such as these led the writer to believe that a little inductive investigation of the matter would not be out of place, since the validity of a widespread belief concerning prestige will have much to do with the morale and efficiency of the teaching profession. It is a sociological truism that both groups and persons thrive on status and die without it. "Status" and "prestige" have only psychological reality, but they are intangible existences which are founded upon objective phenomena and lead to genuine modifications of behavior. For instance, the Sims socio-economic scale (among others) attempts to measure social stratification by such indices as the possession of a telephone, number of books in the home, etc. There is little question that the possession of such cultural apparatus is positively

associated with degree of community "standing," but it permits only a rough classification into occupational groups (such as "professional" versus "artisan") and does not yield a clear distinction between the professions themselves.

Presumably a tentative prestige hierarchy for the various vocations can be obtained by securing ratings of selected occupations from a large body of respondents, who are themselves representative of diverse fields of endeavor. The assumption involved is that persons confer reputation and prestige according to the social values which they half-intellectually, half-emotionally hold. Since it was this method which was used in procuring the material listed below, a detailed description of the procedure will be in order.

GENERAL PROCEDURE

A personal interview was arranged with a number of adult individuals in different walks of life. The interviewer brought a set of plain white cards with the name of a single occupation printed upon each. The purpose of the study was briefly presented orally, after which the interviewee was given the following instruction sheet:

On each of the accompanying cards you will find the name of a familiar occupation. You probably do not feel the same about each one. Place the cards in the *order of your admiration* for the professions or vocations here given. Try to answer for yourself the question, Which occupation do I respect most? Then ask, Which occupation do I think least of? Finally, place all the remaining occupations in their proper position, according to your esteem for them. Do not base your judgment upon any particular person, but simply rank the

occupations according to your *general opinion* about them.

Few persons experienced any trouble in making the preferential arrangement of the cards, and from the time required and the facial expressions involved, it was clear that a serious and critical effort at ranking was made. Following each arrangement the interviewer took a numerical record of the placement order and shuffled the cards before submitting them to the next subject. Three consecutive efforts at community sampling were made during the Spring, Summer, and Winter of 1933, and since these differed somewhat among themselves, a separate account of each will be given.

RESULTS

Series I. The first set of data was secured from twenty-five persons in the city of Bethlehem, Pa., and twenty-five in Nazareth, Pa., the populations of the cities being 52,000 and 6,000 respectively. A dozen vocations were listed in this set, including three levels of the teaching class—grade teacher, high school teacher and college professor. The other nine are: U. S. Senator, physician, lawyer, merchant, factory manager, letter carrier, bricklayer, salesman, and garage mechanic. The results of this survey appear in Table 1, with the occupations arranged in *decreasing* order of social prestige from left to right.

The most impressive single fact to be derived from these figures is the unexpected consistency of the results for both the larger and the smaller town. This agreement is of significant help in overcoming two common objections:

1, that the interviewees based their ratings upon the personalities of the representatives of different careers known to them rather than upon the occupation *per se*; and 2, that the time of the interview has an important bearing upon the rating. Thus, the first argument would be that if Mr. X, the postman, were a good friend of the family, he would be rated higher than salesman Smith who was a mean fellow

TABLE 1

The relative prestige of twelve representative occupations in two communities as determined from the ratings of fifty typical inhabitants

OCCUPATION	MEAN BETH- LEHEM RANK- INGS	MEAN NAZA- RETH RANK- INGS	MEANS FOR BOTH CITIES
Physician.....	1.88	2.20	2.04
U. S. Senator.....	2.36	3.00	2.68
College Professor.....	2.92	3.36	3.14
Lawyer.....	3.08	3.56	3.32
High-School Teacher.....	5.16	5.24	5.20
Grade Teacher.....	6.12	6.52	6.32
Factory Manager.....	6.48	6.28	6.38
Merchant.....	7.72	6.84	7.28
Letter Carrier.....	9.64	8.96	9.30
Garage Mechanic.....	10.04	9.56	9.80
Salesman.....	10.64	10.68	10.66
Bricklayer.....	11.44	11.48	11.46

anyway. The second point would emphasize the fact that if sometime before the interview, an auto mechanic had saved the day by repairing a breakdown, a distinct elevation in his status would be inevitable. While it is undoubtedly true that these factors are operative (the distinction raised by the first objection is especially hard for most persons to make), they serve only to distort individual rankings and do not affect seriously the group positions.

As might have been anticipated,

the professions generally stand near the top and the "labor" group near the bottom. The three divisions of the teaching class also occupy about the position to which their place in the educational hierarchy presumably entitles them, i.e., the grade teacher is exceeded by the high school teacher, who in turn is exceeded by the college professor. However, it is significant that both branches of public school service stand higher than the factory manager, despite the fact that the superintendent of the steel mill in the one city and the head of the cement plant in the other are both economically powerful individuals. While the income of these occupations is in part associated with the degree of prestige, this is not wholly true since the financial strength of the typical factory manager and merchant probably falls well above that of all the teaching classes represented. Clark³ has shown that the mean income of lawyers exceeds that of college professors, but in social status (as distinct from purely *economic* status) the latter have a slight edge. Certainly the assumption that teaching is commonly regarded as a "failure belt" is hardly warranted.

Series II. In the next step of this study, a more extensive list of 25 occupations was chosen for rating in the belief that finer and more reliable differences would be revealed. This new list may be read from the column in Table 2. In addition, new communities were sampled. Forty-two interviews were held in Mt. Union, Pa., a small industrial and railroad town of

³ Harold Clark, *Economic theory and correct occupational distribution*, New York, 1931.

about 5,000 inhabitants, and another fifty in the villages of Pleasant Gap and Centre Hall, which have an agricultural hinterland. The rating instructions and card technique were kept the same as before. In Table 2 will be found the average rankings obtained.

TABLE 2

The relative social status of 25 occupations according to the opinions of 92 representative citizens of central Pennsylvania

RANK ORDER	OCCUPATION	MEAN POSITION
1	Doctor	5.48
2	Senator	7.26
3	Lawyer	7.53
4	College Professor	8.05
5	Civil Engineer	8.39
6	Dentist	8.49
7	Clergy	8.64
8	High School Teacher	8.64
9	Factory Superintendent	8.80
10	Merchant	10.35
11	Grade Teacher	10.70
12	Salesman	12.59
13	Nurse	13.05
14	Actor	13.16
15	Mail Carrier	14.12
16	Garageman	15.14
17	Tailor	16.46
18	Bricklayer	16.49
19	Baker	17.42
20	Police	17.60
21	Plumber	17.76
22	Miner	18.49
23	Barber	18.59
24	Cook	18.88
25	Fisherman	20.04

On the whole, the results presented in Table 2 accord with those found in Table 1. The lawyer this time has nosed slightly ahead of the college professor, and the grade teacher has fallen behind the factory superintendent and the merchant; note that the relative

positions of the high school teacher and clergyman are identical. The greatest displacement occurs in the case of "salesman," which may be due to the ambiguity of that designation, embracing as it does anyone from a hardware clerk to the field representative of a great firm.

TABLE 3

Rank order of prestige of 25 occupations in the judgment of one hundred representatives of other occupations

RANK ORDER	OCCUPATION	MEAN POSITION
1	Physician	3.95
2	Lawyer	4.58
3	College Professor	4.84
4	School Superintendent	6.25
5	Clergyman	6.49
6	School Principal	7.81
7	High School Teacher	8.93
8	Government Employee	9.19
9	Elementary School Teacher	9.86
10	Electrician	10.17
11	Machinist	11.54
12	Bookkeeper	12.16
13	Farmer	12.39
14	Carpenter	12.59
15	Baker	14.00
16	Store clerk	15.67
17	Policeman	16.27
18	Chef	16.51
19	Barber	16.56
20	Truck Driver	17.73
21	Laborer	19.50
22	Janitor	21.39
23	Messenger	21.58
24	Night Watchman	21.66
25	Bootblack	23.20

Series III. On this occasion, a slightly altered list of 25 occupations was presented to one hundred interviewees in Port Matilda (a village of several hundred farmers and their families), Tyrone (a small city), and Altoona (a large manufacturing and

railroad center). About a dozen unemployed adults were among the persons making the ratings in this series; in all other respects, the interviewees represented the same wide range of vocations as used on the two preceding occasions. Table 3 shows the results secured from this group.

Notice that this list contains for the first time the names of "school superintendent" and "school principal." It seemed desirable to increase the representation of the "educational" group to embrace these two administrative careers. Essentially, these figures parallel and confirm those listed in Table 2; the existence of a definitely established hierarchy among the different forms of educational service is also clearly marked.

As usually happens with statistical material of this sort, the number of first mentions for each career supports the indications conveyed by the means. Thus, 33 persons in 100 gave first place to "physician," 17 to "lawyer," 14 to "college professor," 6 to "school superintendent," 2 to "school principal," and none to either "high-school-teacher" or "elementary teacher."

Overlapping among all vocations is large as is evidenced by the following standard deviations:

College Professor.....	3.94
School Superintendent.....	4.34
Principal.....	3.86
High School Teacher.....	3.84
Elementary School Teacher..	3.62

The highest S.D. was 5.00 (for government employees); the lowest 2.32 (for bootblack). The large variability of government employees may result from the same cause which seemed to explain the fluctuations of "salesman,"

viz., the ambiguity of the designation. A government employee may include anyone from a high bureau chief to a minor office clerk.

SUPPLEMENTARY DATA ON OCCUPATIONAL "INSIGHT"

Is there a tendency to over-estimate or to under-estimate the prestige of one's own occupation? To what extent do "self" ratings of each vocational group agree with the relative positions allotted to them by other professional classes? Presumably by comparing the status awarded to a given career by individuals engaged in it with that conferred by "disinterested" outsiders, one can determine the amount and precision of class-consciousness thereby revealed. The closeness of agreement between external and internal ratings may then be considered a measure of occupational insight.

The data needed to answer these questions were secured in the Wilkes-Barre district of Northeastern Pennsylvania by interviews arranged with representatives of twelve occupations, each one of which ranked itself along with the remaining eleven careers listed. The rating technique was identical with that described above. The raters were not aware that their own self-estimates were thus indirectly being obtained, since they were told that they were being asked to respond only because they offered a good sampling of general public opinion. It was the original intention to secure twenty persons from each career, but the time limitations of many busy professional men made it impossible to attain this objective. Only two persons among

TABLE 4
Mutual status ratings conferred by 167 individuals in Northeastern Pennsylvania
 (Figures in parenthesis represent the average deviations of the means they accompany)

OCCUPATIONS RATED		VOCATIONS OF INTERVIEWEES MAKING RATINGS												OTHERS' GRAND AVERAGES
		Doctor	College Prof.	Civil Engineer	Lawyer	High School Teacher	Grade School Teacher	Post-Office Clerk	Grocery Owner	Stenographer	Coal Miner	Plumber	Truck Driver	
Number.....		10	10	7	13	18	20	15	10	20	20	4	20	
Doctor.....		1.10 (.18)	1.50 (.70)	4.42 (3.06)	2.07 (.57)	2.33 (.93)	1.65 (.81)	1.20 (.35)	1.3 (.26)	1.7 (.77)	1.55 (.61)	3.0 (2.00)	1.45 (.63)	2.02 (.68)
College Professor.....		2.50 (.80)	2.40 (.72)	2.85 (.74)	3.84 (1.68)	3.16 (1.18)	3.95 (1.06)	2.93 (.88)	3.1 (.78)	2.85 (.71)	2.4 (1.36)	3.25 (.75)	2.95 (.97)	3.07 (.35)
Civil Engineer.....		4.10 (.94)	4.7 (1.10)	2.85 (1.06)	4.38 (1.24)	4.22 (1.78)	4.7 (1.39)	3.66 (1.02)	4.5 (.14)	3.86 (1.04)	4.8 (1.02)	5.0 (3.0)	3.3 (1.04)	4.29 (.43)
Lawyer.....		5.70 (3.58)	3.2 (1.68)	7.0 (3.14)	1.46 (.57)	4.83 (2.13)	4.75 (2.0)	3.73 (1.64)	3.4 (.20)	2.5 (.12)	3.6 (1.42)	6.0 (3.5)	3.0 (1.0)	4.34 (1.20)
High School Teacher.....		4.20 (.80)	4.4 (.60)	3.85 (1.89)	5.30 (.99)	3.66 (1.30)	4.15 (.93)	4.86 (1.14)	5.1 (.74)	4.8 (.62)	4.95 (1.01)	4.0 (1.0)	5.2 (.65)	4.62 (.45)
Grade School Teacher.....		5.50 (1.30)	5.9 (1.7)	4.71 (2.61)	5.61 (1.09)	5.00 (1.33)	3.65 (1.95)	6.13 (1.34)	6.4 (.76)	5.9 (.57)	6.05 (1.83)	5.25 (2.25)	6.3 (.96)	5.70 (.32)
Post-Office Clerk.....		7.70 (.70)	7.6 (1.12)	8.42 (1.51)	9.69 (1.46)	8.22 (1.33)	8.3 (.99)	7.13 (1.66)	8.5 (1.0)	7.25 (.93)	7.35 (1.15)	7.75 (1.25)	7.65 (1.16)	8.04 (.53)
Grocery Owner.....		7.70 (.90)	8.9 (1.72)	7.85 (2.12)	8.9 (1.18)	7.72 (1.28)	8.7 (1.62)	8.86 (1.38)	7.1 (2.5)	9.05 (.58)	7.9 (2.45)	9.5 (1.25)	8.2 (1.70)	8.48 (.55)
Stenographer.....		8.60 (1.68)	10.0 (1.20)	9.28 (1.39)	8.1 (1.41)	8.83 (1.37)	8.3 (.99)	8.2 (.85)	8.7 (1.1)	7.65 (.92)	8.4 (1.64)	8.5 (1.55)	8.45 (1.60)	8.67 (.39)
Coal Miner.....		9.90 (1.5)	9.2 (2.28)	7.57 (1.79)	8.3 (2.51)	9.62 (1.58)	8.7 (2.16)	11.2 (1.04)	9.2 (2.56)	11.05 (.86)	9.45 (1.55)	7.5 (3.0)	10.55 (1.23)	9.34 (1.01)
Plumber.....		9.70 (1.1)	9.9 (.92)	9.28 (2.1)	9.1 (1.24)	10.5 (.89)	10.25 (1.0)	9.46 (.97)	9.3 (1.44)	10.3 (.86)	9.9 (.83)	7.0 (3.0)	9.95 (.87)	9.79 (.38)
Truck Driver.....		11.1 (.90)	10.3 (1.24)	9.85 (1.59)	11.0 (.77)	10.88 (1.16)	11.2 (.72)	10.46 (.84)	11.4 (.84)	11.15 (.60)	11.65 (.46)	11.25 (.75)	11.0 (1.0)	10.92 (.42)

all those approached refused to make a listing. Table 4 presents a condensed picture of the findings of this section; the italicized figures represent occupational "self"-ratings.

Contrary to the expectation of those who consider vanity the chief of human weakness, there is little evidence of any marked occupational egocentrism in these figures. Apparently each career has a pretty good notion as to where it stands with reference to other walks of life. It is true that every vocation (with the exception of coal miner and truck driver) assigns a somewhat higher position to itself than that granted by the remaining eleven in the list, but the differences are very slight. The physicians stand first and know it; the lawyer is disposed to place himself just ahead of the professor, but most of the other vocations reverse the order; the engineer puts himself on the same plane as the professor and gives the physician a lower average rank than any of the others are willing to accord (perhaps because his technical training makes him sensitive to the "guesswork" commonly seen in medical practice). The elementary and secondary school teachers when rating themselves emerge on an equal level—an outcome wholly in accord with contemporary educational philosophy—but the rest of the world definitely sets the high school job ahead; however, there is some evidence of professional jealousy between the two, for we find each implying by its rankings that the two forms of educational service should shift positions with respect to "status." The superiority of the post-office clerk over the grocery store owner suggests that a governmental

employee has an edge over a private entrepreneur of similar background. The few plumbers sampled appear to be protesting against their lowly status, but the coal miners and truck drivers exhibit an uncanny objectivity and precision in appraising themselves. Table 4 indicates throughout that competition for status operates *within* either the bourgeois or proletarian areas, but that between the two "classes" as such a definite prestige gap exists of which both are clearly aware.

CONCLUSIONS

Despite the obvious imperfections of the evidence here submitted, and the absence of any extended causal analysis, one feature appears to be indisputably true—the public school teacher stands lowest among the accepted professional groups, but definitely above the great body of business, industrial, and commercial pursuits. If the public school teacher lacks caste, it must be only with the numerically small professional groups who stand above her; certainly this does not hold for the great body of citizens who fall below her in "status." If "average" social status is represented by the mean positions of such diverse vocations as salesman, nurse, bookkeeper, farmer and carpenter, then there is not the slightest doubt that teachers as a class stand above these in "repute." In the eyes of the well-established professions, the school teacher may well suffer that uncertain appraisal which has historically been the fate of every semi-profession during its transitional stages but in the eyes of the larger body of non-professional claimants she stands definitely among the elect.

Certain limitations of this investigation should be indicated, particularly since they can all easily be corrected in any further study of this problem. Although an extremely broad distribution of occupations was found among the persons making the ratings, no effort was made to see that the proportion of a given vocation among the interviewees was equivalent to that of the population at large, i.e., if one person in five among those gainfully employed in the United States is classified as an agricultural worker, then twenty per cent of the raters presumably should come from that group. This supposes that the opinions of all occupational groups are equally effective as "prestige determinants," whereas it is more likely that the ideas of some classes (such as the articulate urban and professional branches) are disproportionately influential. However, since the extent of this disproportion is unknown it would seem desirable to

have occupations represented in about their national ratios. The material basis for more refined predictions concerning differences in status would thus be made available.

Finally, one must recognize the historical and geographical relativity of these social prestige rankings. The esteem in which the American public holds bankers has probably altered markedly from 1929 to 1933; a century ago the ministry would have stood higher than it now does. The physician in the Soviet Union would probably be considered as standing below rather than above the engineer because of the direction which Russian national planning has taken. A dynamic society such as ours can readily produce shifts in stratification, and from what we know of social laws it seems probable that forces external to an occupation as such are mainly responsible for its displacement in the prestige hierarchy.

Occupational Status and Intelligence

BY GERTRUDE HILDRETH, *Lincoln School of Teachers College*

Six hundred public school children and a similar number of children in a private school were classified according to the occupation of the head of the family. Stanford Binet test records were available for all of the children. The Taussig five-fold occupational grouping scheme was applied to the public school pupils and median I.Q.'s were computed for each group. The median I.Q.'s were as follows: Professional, 113; Executive and business, 107.5; Skilled labor and clerical, 97.5; Semi-skilled labor, 84; Unskilled labor, 75.7. Wide overlapping in mental ability between the several occupational levels was found. The entire population of the private school fell into the first three Taussig groups. Small differences in median I.Q. are found between a variety of occupation represented in the private school population.

EVIDENCE from an extensive series of research studies indicates positive association between the mental ability of children as measured by standardized tests and the occupational status of their parents rated according to occupational scales such as those of Taussig, Barr, Burr, Fryer, Counts, Menger, and the Army Scale. The most comprehensive summary of results of the various studies is that contained in Pintner's *Intelligence Testing, Methods, and Results*, Revised Edition, Holt, 1931.

Data that confirm conclusions of previously published studies have been obtained by the writer from two different sources. The first is that of an unselected school population in a city in the oil industry section of Oklahoma, the data having been obtained prior to the depression. In addition, data were gathered from all students, elementary and high school, in a private school in a large city. Pupils were given the

Stanford Revision of the Binet Scale for measuring mental capacity.

PUBLIC SCHOOL DATA

Information concerning the occupational status of the male parents of 608 children of the total school population of 2000 was obtained. The children ranged in grade from first to eighth and their median I.Q. was 97. Every child for whom there was both a Binet mental rating and reliable evidence of parent's occupation was included in the study. Information concerning parental occupation was obtained from the official school census cards, compiled by the school attendance officer. The mother's occupation was used in the tabulation in case the mother instead of the father was listed as the wage earner of the family. In no case was the occupation of both parents included. The number of cases in which the mother's occupation was listed in place of the father's proved to be

negligible, about 1 per cent of the total. In doubtful cases the occupation listed was checked with other sources of information concerning the family.

Group II. Executives and managers, bankers, factory managers, real estate and insurance dealers, store owners.

Group III. Skilled labor and clerical workers, postal clerks, shop and fac-

TABLE 1

Showing the relation between Intelligence Quotients and parents' occupations

I.Q.	GROUP I PROFES- SIONAL	GROUP II EXECUTIVE BUSINESS	GROUP III SKILLED AND CLERICAL	GROUP IV SEMI-SKILLED	GROUP V UNSKILLED
145	1	2			
140	1	1	2		
135	1	4			
130	4	3			
125	3	3	4		
120	5	12	11		
115	5	16	18	1	1
110	5	29	12	4	1
105	8	19	37	1	2
100	2	17	30	6	
95	4	16	30	4	4
90	2	12	31	4	2
85	1	9	25	10	9
80	1	8	24	10	8
75		1	15	8	21
70	1	2	11	6	15
65			3	4	12
60			1	3	8
55				3	5
50				1	1
45		1			1
Total	44	155	254	65	90
Per cent	7.2	25.2	41.8	10.7	14.8
I.Q. range	70-150	45-150	60-140	50-115	45-115
I.Q. median	113	107.5	97.5	84	75.7
Per cent superior I.Q.	56.8	45.1	18.5	7.7	2.2
Per cent normal I.Q.	36.5	41.3	50.4	23.1	8.8
Per cent subnormal I.Q.	7.7	13.6	31.1	69.2	88.9
Per cent above total median	84	75	52	22	7
Per cent below total median	16	25	48	78	93

Parental Occupation was classified in general according to Taussig's¹ scale:

Group I. Professional, including doctors, lawyers, clergymen, teachers, professional engineers.

¹ F. Taussig. *Principles of Economics* (Second Revised Edition), Macmillan, 1920.

tory clerks, shop foremen, skilled oil field occupations, carpenters, plumbers, mechanics, glass-blowers.

Group IV. Semi-skilled labor, including oil field pumpers, pipe-line workers, teamsters, truck drivers, farmers.

Group V. Unskilled labor, including day laborers, road menders, hucksters, washerwomen, and those described as "always out of work" or of whom it was said, "works at anything he can get." In questioning one child in an effort to check up on the parent's occu-

vary from refinery executive and engineering positions to unskilled field labor. The city has a large transient population affected by the fluctuations in the oil and gas industry.

Table 1 indicates the relationship between the Intelligence Quotients of

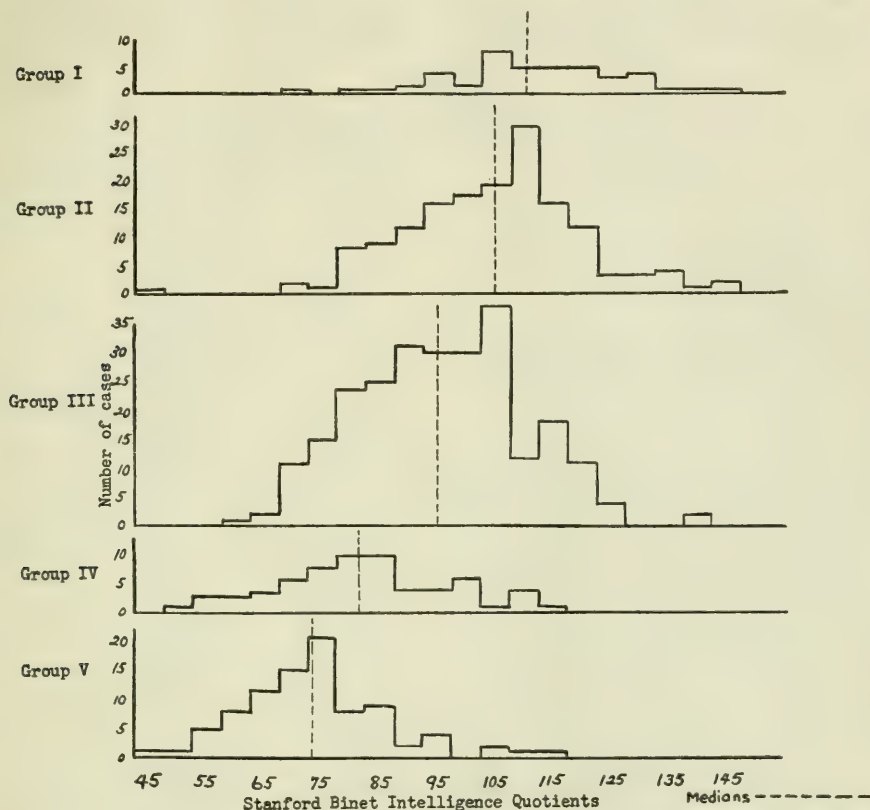


FIG. 1. DISTRIBUTION OF INTELLIGENCE QUOTIENTS ACCORDING TO OCCUPATIONAL GROUP OF PARENT

pation the response was, "Daddy's still trying to fix up the car so he can go out to look for work."

Occupations in the oil industry were naturally more numerous than those in other specialized occupations. They comprise practically a fourth of the total. The occupations in this field

children and the occupational rating of their parents. The results are shown graphically in figure 1. These results indicate that every group contains one or more individuals testing as high as 120 I.Q. and as low as 70 I.Q. The overlapping of the mental ability of children in all groups is an

important finding. However, a child in group I has five times as many chances of being above the median of the entire group as below; a child in group II has a three to one chance of being above the median; in group III, the chances are even; in group IV the chance is more than three to one that a child whose parent falls in this occupa-

range from 5.5 between Groups I and II to 13.5 between Groups III and IV.

Several factors may account for the wide range in I.Q. within any one group. One factor is the wide range in parental talent normally to be expected within any one occupation group. This might be particularly apparent in the group labeled, "sales-

TABLE 2
I.Q.'s of children according to occupation of parent

PARENT'S OCCUPATION	MEDIAN I.Q. OF CHILDREN	I.Q. RANGE	NUMBER OF CASES
Research Worker.....	129	113-140	11
College Professor.....	126	92-165	69
Musician (Composer or Performer).....	126	108-150	18
Business Executive.....	121	93-153	118
Merchant.....	121	96-154	46
Welfare work director or administrator.....	120	107-132	16
Writer.....	120	100-159	25
Clerical and secretarial.....	120	106-130	13
Missionary.....	118	96-135	8
Engineer.....	119	97-154	33
Physician, dentist, optometrist, pediatricists.....	118	90-159	49
Real Estate Dealer.....	117.5	98-137	19
Clergyman.....	117	103-137	18
Salesman.....	117	79-183	12
Manufacturer.....	117	98-137	28
Business-general and unclassified.....	117	96-157	23
Artist (including commercial art).....	116	96-137	17
Lawyer.....	116	89-143	33
Teacher, below college level or unspecified.....	112	97-135	27
Unclassified: scientist (2), statistician (1), plumber (1), tailor (1), foreman (1), printer (4), statesman (4), builder (2), Army Officers (1), Architect (4), Educator (8).....	116	89-141	29

tional group will be below the median of the entire group; and in group V the chance of the same condition happening is 13 to 1. The group medians become lower from group I to group V and the difference between the medians of these two groups is 37.3 points. Differences between each of the five groups and the next adjacent one

men." Furthermore, in the placement of children in occupational categories, the occupational status of only one parent has been considered. And in the third place, the mental test ratings contain a factor of unreliability. Case studies of some of the individuals included in the study reveal factors that account for unreliability in test results.

Even if these factors were eliminated or corrected, the data indicate far from perfect correlation between capacities of parents and offspring.

The results of the present study confirm those of Duff and Thomason.² After testing 13,500 school children and grouping them in parental occupational groups, they found that children of professional classes rated brightest on the average, children of skilled workers range in the middle of ability, and children of hawkers, chimney-sweeps, insane and criminal classes rank lowest in intelligence.

PRIVATE SCHOOL RESULTS

The private school group from whom data were available includes 583 elementary and high school students. Data concerning the occupation of parents were obtained from the information questionnaire filled out by parents when pupils are registered at the school. As in the case of the public school data the occupation of the male parent only is counted, unless the mother is the family bread-winner. Again the percentage of mother's occupations listed is negligible. The entire group falls into the first three of the Taussig Classification.

In analyzing these data an occupa-

tional classification containing 19 occupational groups was used. The median and range of I.Q.'s of the children represented in each of these groups are presented in table 2.

Since this school population as a whole is highly selected due to a number of factors (tuition fees, urban location, superior methods, social prestige, high standing), the results as indicated in the table may not necessarily be representative of the general run of either private or public school populations. But the fact that the school population comes largely from the professional, executive, and business groups has been found to be characteristic not only of the school from which these data were obtained, but of other private and tuition schools as well. Little significance should be attached to some of the differences in the medians found for the different occupational groups because of the small number of cases in some of the categories, but the groups of more substantial size probably indicate significant trends in relationship between the occupations of parents and mental capacity of children.

A significant finding is the wide range of mental ability represented by the children of any one occupational group and, especially in the private school, the large amount of overlapping of ability in all occupational groups.

²J. F. Duff and G. H. Thomson. The social and geographical distribution of intelligence in Northumberland. *British Journal of Psychology*, 14, Part 2, 192-198.

Vocations of College Men, 1849-1934

A Study of Alumni of the College of the City of New York

BY MORTIMER KARPP, *The College of the City of New York*¹

Mr. Karpp's profusely illustrated article traces the changes in the type of careers chosen during the past eighty-five years by graduates of the College of the City of New York.

ONE measure of the effectiveness of a college is the record of the careers of its alumni.

Whether a school merits consideration, public support, and continuance depends in large part upon the activities of its former students when they have gone out into the world.

The writer has made a study of the character and direction of the careers of City College Alumni since 1853,

¹ The writer cannot express sufficiently his indebtedness to Dr. Arthur F. Payne, Mrs. E. P. Morgan, Mrs. R. Chipkin and the Fellows of the Personnel Bureau of City College for their inspiration, encouragement, and aid in the eventual publication of this study. In one way or another they are responsible for the worthwhile parts of this paper.

To Dr. Harold H. Abelson and to Messrs. Peter Oliva, '38 and Oscar Lefkowitz, '36, a special acknowledgment must be made, for without their assistance, this might never have been completed.

The writer wishes to thank the Princeton Alumni Weekly and the Harvard Alumni Bulletin for permission to use articles published originally in those publications and quoted therefrom. To Donald A. Roberts, Secretary of the Associate Alumni of City College, appreciation is here recorded for his very kind coöperation.

when the first class was graduated from what was then called the Free Academy.

SOURCE OF DATA

Data were obtained on the career of every alumnus whose life record was available in usable form. The data were drawn from the Alumni Register, published by the Associate Alumni of the College in 1932. The group numbers 8,020, about two-thirds of the total number in attendance at City College between the years of 1849 and 1930. The occupation recorded for each man is that which he followed during the major part of his adult life. Significant data (with respect to current trends, especially) were taken from the records of the Personnel Bureau at City College. Use was also made, wherever specified, of alumni publications of other colleges.

8,020 CAREERS SUMMARIZED

Some facts resulting from the study impress by their mere mention. Slightly more than one-quarter (25.8 per cent) of the whole group have made education their life work. Almost as

many, 24 per cent, have followed the profession of law. A sixth (16.6 per cent) have adopted medicine as their career. Of the remainder, 5.5 per cent have been engineers, almost 3 per cent have served in the ministry, 1.5 per cent have been dentists, 1 per cent have entered journalism and 1 per cent

seem to indicate. Of the alumni in private careers (omitting those directly concerned with governmental activities—army, navy, teaching and civil service positions), one out of every twenty has found the interest and has



FIG. 1. DISTRIBUTION OF 8020 ALUMNI CAREERS (1853-1930)

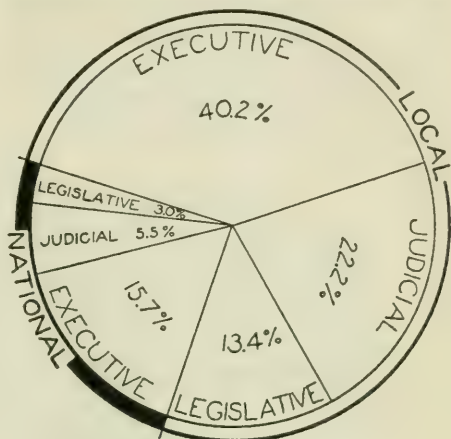
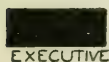


FIG. 2. DISTRIBUTION OF ALUMNI IN PUBLIC LIFE (1853-1930)

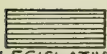
NATIONAL



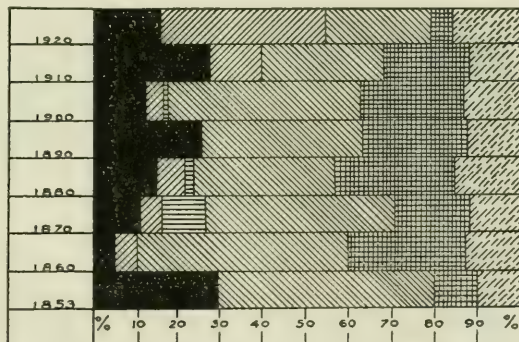
EXECUTIVE



JUDICIAL



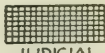
LEGISLATIVE



LOCAL



EXECUTIVE



JUDICIAL



LEGISLATIVE

FIG. 3. TRENDS IN OFFICE HOLDING (1853-1930)

have been artists and architects. In all, four-fifths of the alumni of City College have lived their lives in the professions, in careers of service to their community.

Public service careers. But the City College alumnus has been even more public-minded than the above would

had the ability to hold public office. Of this group, two-thirds have been interested in local government, while the remainder have participated in national affairs.

More than half have held executive positions; 27.7 per cent have been in the Judiciary and 16.4 per cent have

been active in legislative careers. From the very beginning of alumni participation in governmental office, the local executive positions have proved to be the most interesting to City College alumni, maintaining for the entire period a fairly steady percentage of the total number in office. The apparent decline at present may be accounted for by legislative requirements concerning minimal ages

(there are enrolled at present as many students at the college as are included in this entire study of 85 years of City College men), there has not been a decline in the quality of careers chosen. If anything, there has been a continued and increasing awareness of social obligations and opportunity to fulfill them through the unselfish, intelligent, and able practice of a profession.

Ministry. Though a fairly constant

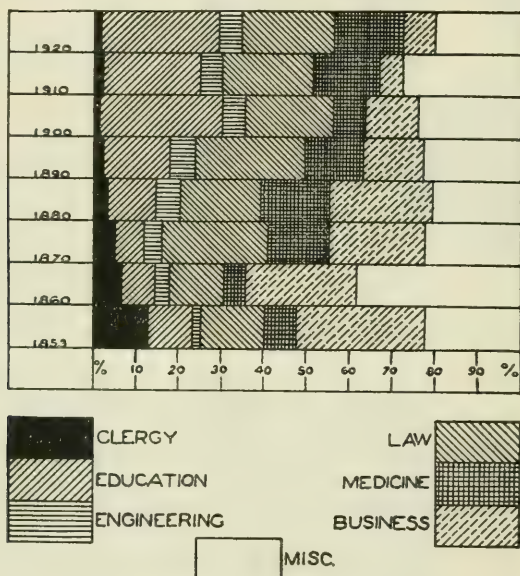


FIG. 4. CAREER TRENDS (1853-1930)

for office-holding. There is every reason to believe that interest in public service is as it always has been.

CAREER TRENDS

Knowledge of the trends within each of the major career classifications, and of the relationship between those trends, gives insight into the attitude of the City College alumnus toward his choice of a vocation. Despite the tremendous growth of the college

percentage of men have entered the ministry since 1880, the earliest graduates counted 12 per cent of their number among the clergy in contrast to a little less than the present 3 per cent. Two hundred and twenty-two City College Alumni have been clergymen.

Education. Education came into its own as a dominant vocational interest of City College alumni with those graduating in the years between 1895 and 1899. Before that time

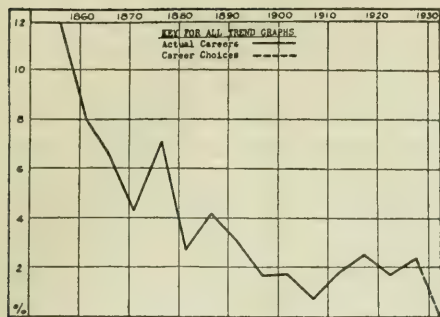


FIG. 5. TREND OF CAREERS IN THE MINISTRY (1853-1934)

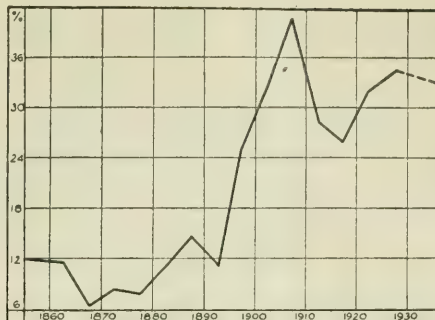


FIG. 6. TREND OF CAREERS IN EDUCATION (1853-1934)

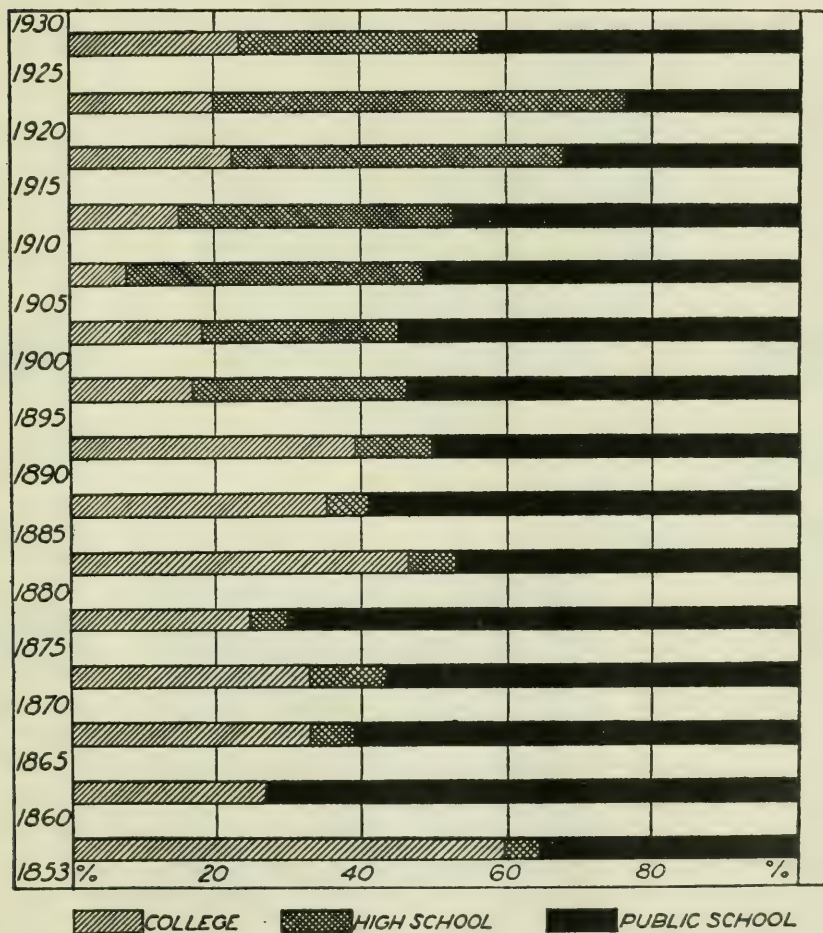


FIG. 7. SPECIALIZATIONS WITHIN ALUMNI CAREERS IN EDUCATION (1853-1930)

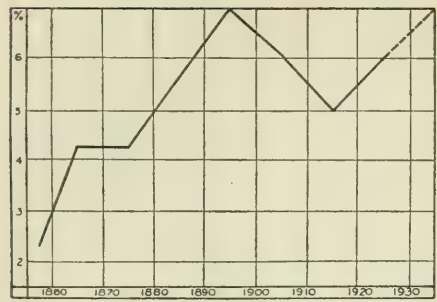


FIG. 8. TREND OF CAREERS IN ENGINEERING (1853-1934)

about 10 per cent had become teachers. Since then, teaching has been the concern of a third or more of each class, though decreasing in recent years as a result of the overabundance of qualified teachers. In all, 2,101 alumni have been engaged in educational careers, on all levels and in all the phases of educational activity.

It is interesting to see that it was public school teaching that had at-

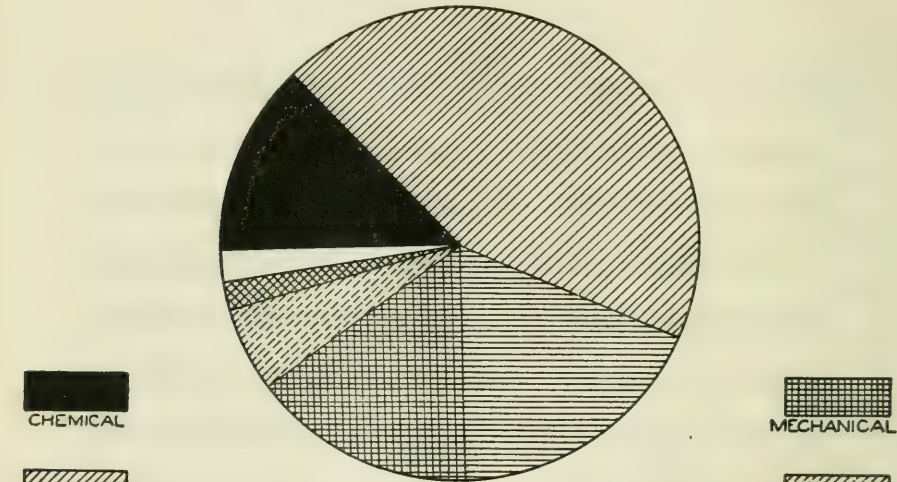


FIG. 9

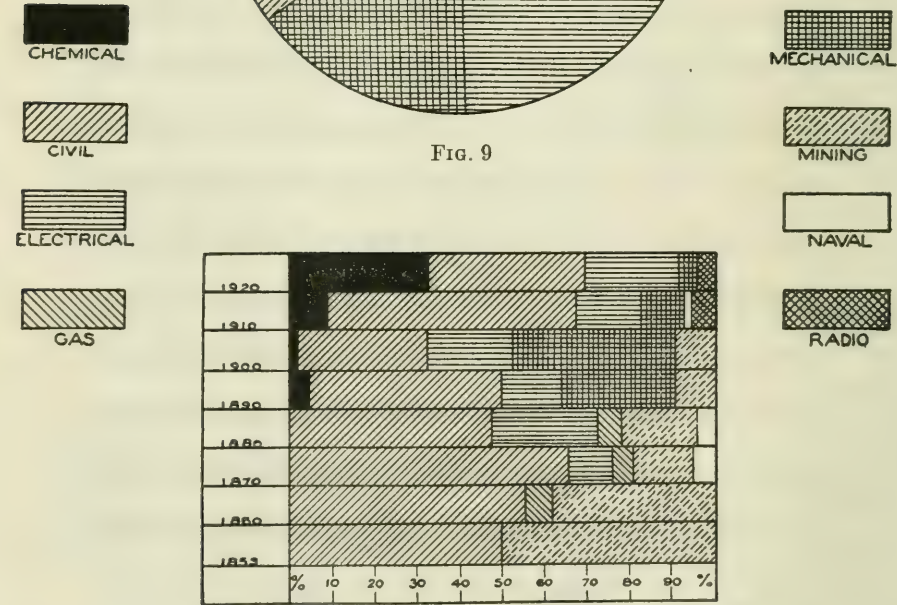


FIG. 10

FIGS. 9 AND 10. DISTRIBUTION OF ALUMNI IN ENGINEERING (1853-1930), AND BELOW THAT, SPECIALIZATIONS WITHIN ALUMNI CAREERS IN ENGINEERING (1853-1930)

tracted most of the men until 1900. Since then increasing numbers have become high school teachers. Nine hundred and twenty-two alumni have been in the elementary school system, 754 in the high schools, and 425 in college teaching. More than half of those in the public schools have held administrative positions.

Engineering. While engineering has interested slightly increasing numbers these last few years, the group entering that profession has been a regular percentage of the total. It has waived only rarely, and then slightly, from

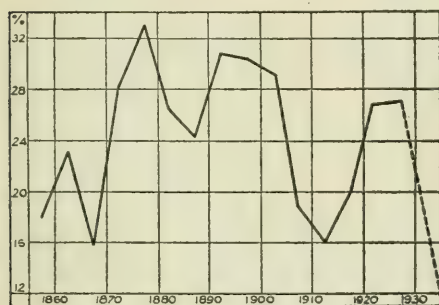


FIG. 11. TREND OF CAREERS IN LAW (1853-1934)

the average of 5.5 per cent. In the specializations within the field of engineering, civil engineering has interested almost half, with electrical, chemical, mechanical, mining, radio, gas, and naval engineering following in the order named. Radio engineering, though it made its first appearance as a career choice of the graduates of 1915, is well on its way to becoming an important division.

Law. A career at the bar proved most appealing to the alumni who left the college between 1870 and 1905, attracting an average of about 30 per

cent of the graduates during those years. The current percentage of 20 is close to that of the early decades of the college. The total number of graduates who have become lawyers amounts to 1937. It is reasonable to believe that most of the men who have been in the Judiciary have also stemmed from this group.

Medicine. Medicine enjoyed its greatest popularity at about the same

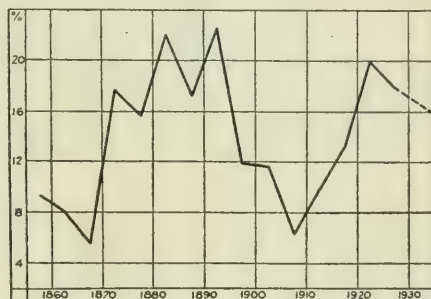


FIG. 12. TREND OF CAREERS IN MEDICINE (1853-1934)

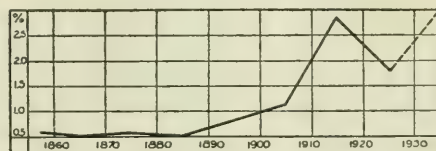


FIG. 13. TREND OF CAREERS IN DENTISTRY (1853-1934)

time as did law, though for a shorter period (from 1870 to 1895), averaging 19 per cent of the students leaving during those years. There was a drop between 1895 and 1915, but since then the number has been on the increase once more and is now about 18 per cent of the entire group. The College has contributed 1134 of its former students to the field of medicine.

One out of every 15 men with a career in medicine has been interested in

an active and sustained way in medical education, either as professor or lecturer in a medical school. This very high ratio of physicians who are also medical educators speaks well for the plane on which they hold their profession and their interest in the advancement of their chosen occupation.

Dentistry. One hundred and twenty-four of the alumni have become dentists. It was only with the turn of the century that this career can be said to have seriously interested the graduates, since there were only 15 men who entered the profession from 1853 to 1900. It reached its height of interest in the years immediately preceding

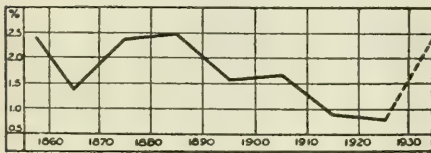


FIG. 14. TREND OF CAREERS IN JOURNALISM (1853-1934)

the war and has become a fairly regular outlet for vocational interest of recent graduates.

Journalism. One hundred and ten alumni have been members of the Fourth Estate. A career in journalism was most appealing to those being graduated from 1895 to 1910. Thereafter, interest decreased sharply until 1925, when a revival took place.

Miscellaneous professions. Art and architecture have interested 80 men of the total group studied. Slightly more than half have been interested in architecture. It was from 1880 to 1900 that the graduates were most interested in these creative careers.

Music has interested only 41 gradu-

ates; one-third of these have been engaged in musical education. Ten of the remaining men have been composers.

Thirty-two of the college's alumni have been active in the field of amusement. While the largest part of them have been interested in the motion picture industry, all phases of the theater (management, production and acting) have furnished an outlet for alumni interests.

Social work has claimed 19 of the total number. The major portion of those were graduated between 1910 and 1914.

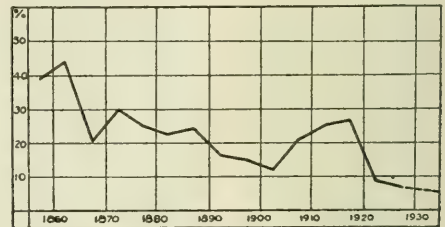


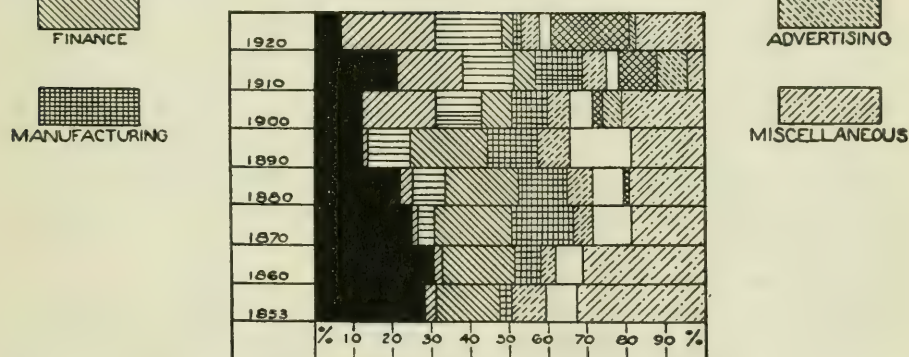
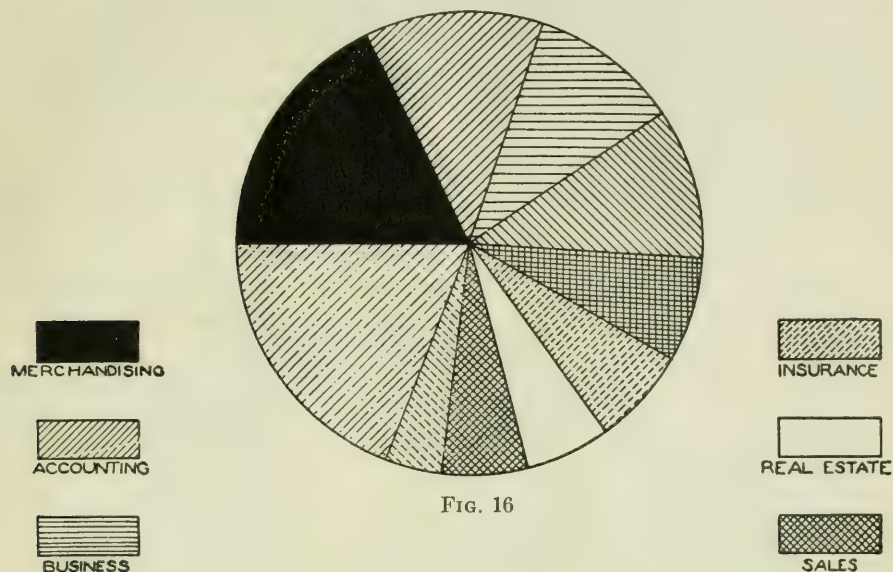
FIG. 15. TREND OF CAREERS IN BUSINESS (1853-1934)

Other miscellaneous professions number about one per cent of the entire group studied and include: drafting, library work, optometry, forestry, geology, biology, lithography, astronomy, psychology, and pathology.

Business. Of the 8,020 alumni surveyed, 1,511 have had careers in business. Since the years 1865-1869 the non-professional graduates have never been more than 27 per cent of the entire group and the percentage for the total period is only 18.8 per cent. In the order of their attraction of alumni, the specializations within business have the following ranking: mercantile, 280; accounting, 180; finance

(bankers and brokers), 170; manufacturing, 157; general business, 153; and then real estate, insurance, sales, clerking, advertising, actuarial work,

business. It is important to note that with the opening of the School of Business of the City College in 1920 and its subsequent physical separation in



FIGS. 16 AND 17. DISTRIBUTION OF ALUMNI IN BUSINESS (1853-1930), AND BELOW THAT, SPECIALIZATIONS WITHIN ALUMNI CAREERS IN BUSINESS (1853-1930)

importing and exporting, publishing, jewelry, auditing, bookkeeping, secretarial work, hotel management, iron foundry, paymaster, and receivership follow as other interests of alumni in

its own building, new students interested in commercial careers began to attend the School of Business rather than the College of Liberal Arts. But even before this separation, the per-

centage of alumni going into business had been falling off considerably.

THE CURRENT TREND

At their entrance and once each year thereafter, City College students indicate their vocational choices in questionnaires administered by the Personnel Bureau. The choices of the students in attendance at the college during the academic year 1933-1934 are shown in Figure 18.

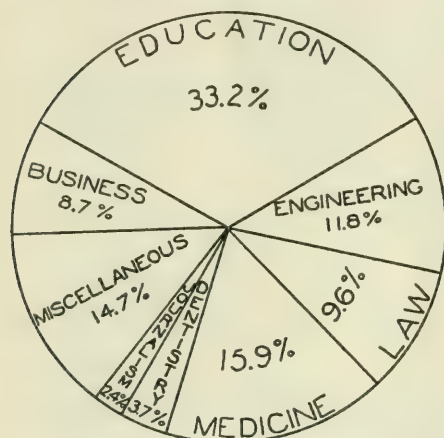


FIG. 18. DISTRIBUTION OF VOCATIONAL CHOICES FOR THE ENTIRE COLLEGE (AS OF 1933-1934)

Major deviations during the past five years from previous tendencies are the rises in percentages interested in engineering, dentistry and journalism, and the decline in the proportion interested in law. There is a very apparent decrease during the last three years in the numbers going into education.

With the current emphasis on the importance of technological training and perhaps the opening of a new building for the School of Engineering at the college, engineering appears to have taken its place as an important

vocational choice of City College students. The number of students interested in engineering careers has averaged 13.5 per cent of the last five classes, as compared with average percentage of 6.5 for the period 1900-1930.

Although 15 per cent of the students have expressed their intention to follow medical careers, only about a third of those may be expected to be admitted to medical schools in any one year. A large number of these men not accepted for medical training are thus diverted into the study of dentistry, pharmacy, kindred sciences (pathology, etc.) and the law.

The students now at the college are, on the whole, continuing the major professional interests of their predecessors.

COMPARISONS WITH CAREERS OF ALUMNI OF OTHER COLLEGES

City College graduates, unlike the graduates of Harvard² and Princeton,³ are not turning away from the professions to business. As indicated in the previous discussion of business careers, the percentage of alumni at City College entering business after college had decreased from 43 per cent in the period 1860-1865 to 8 per cent in 1925-1930.

Consequently, there is a wide discrepancy between the trends in professional activity of City College alumni and the alumni of other liberal arts colleges. It may be true at Princeton and other colleges that

Before the seventies, and for a considerable period afterwards, men went to college

² Harvard Alumni Bulletin, May 18, 1934.

³ The Princeton Alumni Weekly, December 12, 1930.

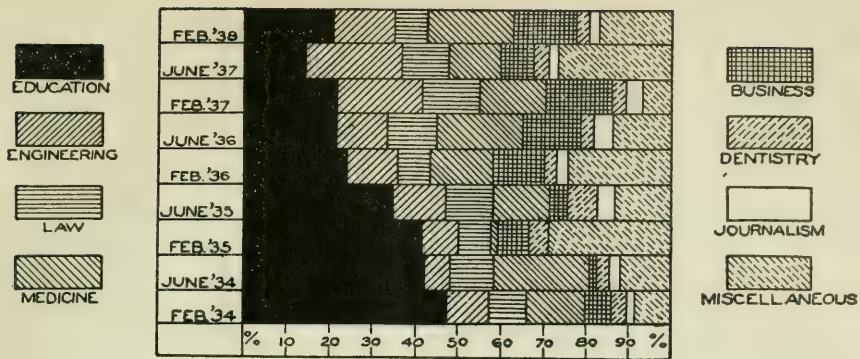


FIG. 19. DISTRIBUTION OF VOCATIONAL CHOICES BY CLASSES (AS OF 1933-1934)

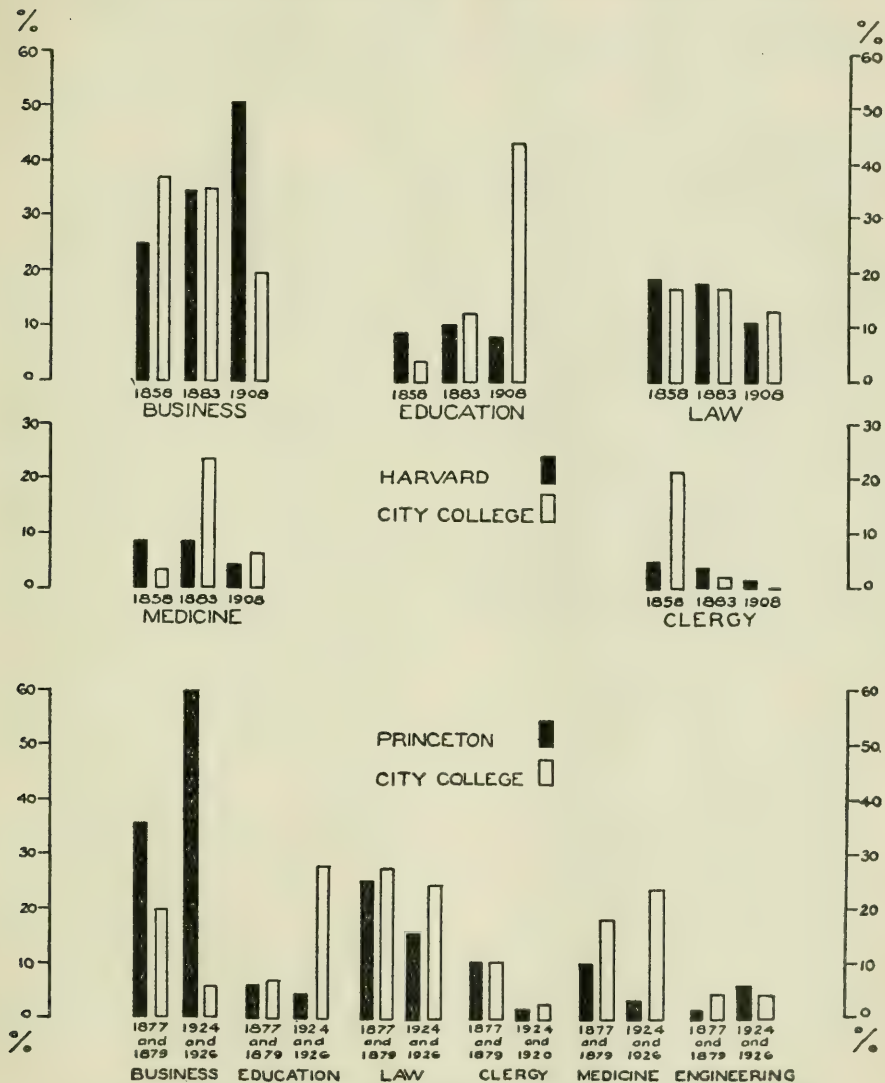


FIG. 20. COMPARISONS WITH CAREERS OF ALUMNI OF OTHER COLLEGES

largely in order to prepare themselves for a professional career. Nowadays many men are going to college for the general training it gives; still others, of course, are apparently going to college just for the sake of becoming college men—whatever that may mean.⁴

At City College, however, the great majority of students are still interested in pre-graduate work leading to careers in the professions.

The percentages of City College alumni in law were originally on an even level with those of Harvard and Princeton, but after the turn of the century those of City College rose considerably. Medicine, on the decline at all three colleges, is showing reversed interest at City College. In education there is the widest divergence in trends, accounted for by the tremendous increase in educational careers at City College during the close of the nineteenth and the beginning of the present century. In engineering Princeton's rise in 1924-1926 brought its percentage close to that of City College. In the ministry all three colleges tell the same story. Despite the increase in population, religion has not kept its attractiveness as a calling for

college men at Harvard, Princeton, or City College.

CONCLUSION

Very little work has been done on the subject of the vocational distribution of college graduates. Random reports have been prepared occasionally for single classes by some interested members of those classes. There is not any generally available study of careers and career trends of the alumni of the colleges of this country. Certain salient facts might result from such a study beside the informational value contained therein. Are the colleges preparing their graduates for their life's work with any due regard for our country's changing occupational patterns? Are the pre-vocational curricula meeting adequately the needs of college students as shown through the careers pursued? Ignorance of changing occupational needs may be excusable for those colleges where students are interested exclusively in improving their cultural background, in vacuo, but an increasing awareness of occupational patterns is essential to colleges where students are preparing for life directly or through pre-graduate study.

⁴ Idem.

Abilities and Unemployment

By C. E. KELLOGG AND N. W. MORTON, *McGill University*

In an article published in this magazine just three years ago, Rex B. Hersey asked, "Is Industrial Psychology Making the Most of the Depression?" The answer, which can now be given, is unfortunately, "No." All but a very few psychologists have not only missed an opportunity; they have evaded a responsibility. Among the few exceptions must be numbered the investigators who here present some of their preliminary findings.

Psychological tests and questionnaires were given to 300 employed and 2,000 unemployed men. Preliminary analysis of some of the data shows that employed office clerks were older than unemployed, had completed more grades of schooling, and had better clerical test scores. When the occupations of the unemployed men were grouped into seven classes, significant differences in test scores were found for these classes. Intelligence, clerical, and educational achievement test scores, and grades of schooling completed varied with the level of occupation. The technical and mechanical workers scored highest on the mechanical tests. Sales workers were found to be definitely more dominant and more stable emotionally than any other occupational group.

CURRENT widespread unemployment demands investigation of the psychological as well as the economic aspects of its causes, conditions of occurrence, and effects.¹ The research program here described suggests a procedure of setting up job specifications which is closely related to certain methods of alleviating persistent unemployment. It is not designed to act in any sense as a panacea, but rather to supplement techniques used by existing institutions in selecting men for work in widely differing occupations. Its ultimate

aim, like that of all methods of vocational guidance and selection, is to aid in promoting individual satisfaction and efficiency in work through better personal adjustment.

Methods recommended for reducing the volume of constant unemployment include the following:²

- (1) Improvement of job selection and placement by means of an efficient system of public employment offices.
- (2) Forecasting of occupational opportunities through the study of industrial and economic trends.
- (3) Use of such prophetic outlook in vocational guidance and training.

¹ Hersey, Rex B. Is Industrial Psychology Making the Most of the Depression? *Personnel Journal*, 1931, 10: 157-166.

² Cf. Douglas, P. H. and Director, Aaron. *The Problem of Unemployment*. Macmillan N. Y., 1931, pp. 151-155.

- (4) Development of facilities for assessing, re-adjusting, and re-training displaced workers.
- (5) Development of a system of job specifications adequate for use by employment offices in making placements.

Recommendations such as these imply at least a working knowledge of job specifications from a functional point of view. Vocational guidance, in acting upon information about current and future occupational opportunities, requires a statement of the meaning of these in terms of the personal qualities likely to be in demand. Re-adjustment of the displaced adult worker necessitates a system of job classification against which to consider his personal qualities and skills. The use of job specifications in these instances as well as in the routine work of public employment offices suggests the gradual development of such specifications in terms of intrinsic human abilities, interests, and traits of personality. At the present time no such specifications, in any workable form, exist. We know very little about the requirements for success in different types of work. Moreover, what knowledge we have is often phrased in terms varying with each job. Barriers between different occupations are created by trade names, although the essential requirements for each may be the same. We therefore must ask questions, as pointed out by Parker,³ concerning the systematic character of occupational abilities, the degree to which they are related, their overlapping and uniqueness for different job requirements,

and their distribution among the general population. In short, we must find out what skills different types of work demand from the worker, and how our knowledge of such skills may be systematized.

Problems such as these led in 1931 to the organization of an admittedly preliminary and groping investigation of the occupational characteristics of employed and unemployed workers in the city of Montreal.⁴ It started with two principal aims: first, to find out what sort of industrial material the Montreal unemployed would make, and secondly, to secure some initial information as to the qualities of workers in different occupations. The method of study included the use of interviews, questionnaires, and psychological tests. To provide a control for the investigation of unemployed groups it was necessary to test wherever possible comparable groups of employed workers. It was assumed that if the unemployed men were for the most part the equal of the employed, the former could then be treated, in respect of tested qualities, as being typical of the general population. On the other hand, if the unemployed were generally inferior, then the traits in which the employed excelled might be taken as traits important for employment adjustment.

Group tests of abilities were used throughout. In addition, individual

³ Parker, W. E. *Methods of the Public Employment Center of Rochester. Personnel Journal*, 1931, 11: 301-317.

⁴ This is one of the projects conducted by the Department of Psychology in a many-sided program of employment research at present being undertaken by several departments at McGill University (coordinated through the McGill Social Research Council).

examinations were made in most cases, but not in all, on account of the time they required. A questionnaire was also used with all unemployed men to secure information about personal and occupational history, education and technical training, causes of unemployment, and other important details. Tests administered up to the present time are as follows:

- Army Alpha (Psychological Corporation Revision)
- Otis S-A Test of Mental Ability (Higher Examination)
- Revised Beta Examination (a revision of the Army Beta non-verbal general alertness examination)
- New Stanford Achievement Examination (Advanced)
- Thurstone Clerical Examination (Form A)
- Moore Revision of the N. I. I. P. Clerical Test
- Scott Filing Test
- Cox Mechanical Ability Tests (Form M1)
- Minnesota Mechanical Assembly Tests (Sets I and II)
- Minnesota Paper Form Board
- Stenquist Mechanical Aptitude Tests I and II
- O'Connor Tweezer Dexterity Test
- O'Connor Wiggly Blocks
- Kent-Shakow Form Board (Form 4b)
- Cube Construction Test (N. I. I. P.)
- Hepner Occupational Interest Blank
- Bernreuter Personality Inventory
- Allport A-S Reaction Study
- Allport A-S Reaction Study (Psychological Corporation Revision)
- A-S Reaction Study (Revision for use at lower-grade level)
- Thurstone Neurotic Inventory
- Woodworth-House Mental Hygiene Inventory
- Neumann-Kohlstadt Diagnostic Test of Introversion-Extroversion
- Allport-Vernon Study of Values.

To all persons were administered from one to ten (usually seven or eight)

of these tests, arranged to cover as many as possible different traits. In Table 1 are shown the intercorrelation coefficients of a number of these tests and the probable error of each correlation coefficient.

About 2,000 unemployed men were secured from several sources, principally employment bureaus and social welfare organizations. Ages varied from 16 to 85, with a mean age of about thirty. Occupations ranged from totally unskilled labor and farm work to the professions. Methods of selection varied with the several sources: usually in the case of an employment bureau circular letters were sent out inviting men to participate in the tests, and assuring them that their individual standing would be reported to them. In addition, notices were posted at strategic points, and a number of persons were sent by social agencies. In the case of one group, secured through a day shelter for the unemployed, eight hundred men were attracted through the reward of a package of cigarette tobacco for every test completed. These methods were of course open to the criticism that the men tested were not necessarily typical of the group from which they came. There was, however, no alternative to this procedure. Actually, a sampling occurred which, whenever it could be checked, was typical for education, although atypical for age (the sampled groups being slightly younger than the source group), and sometimes for nationality.

Conditions of testing were usually moderately favorable. Most of the group testing was carried on in a well-lighted, heated and ventilated class-

TABLE 1
Intercorrelation coefficients, showing the relationships between age, education, and test scores for unemployed men

	AGE	EDUCATION	OTIS	BETA	BETA, TEST 4	NEW STANFORD	THURSTONE (CLERICAL)	STENQUIST	O'CONNOR BLOCKS
Age.....									
Education.....	-.198 ± .037	-.198 ± .037	-.226 ± .054	-.519 ± .026	-.306 ± .033	-.265 ± .040	-.350 ± .047	-.274 ± .038	-.151 ± .039
Otis.....	-.226 ± .054	.276 ± .053	.276 ± .053	.621 ± .027	.437 ± .036	.535 ± .035	.574 ± .036	.206 ± .051	.081 ± .056
Beta.....	-.519 ± .026	.621 ± .027	.622 ± .047	.622 ± .047	.552 ± .053	.737 ± .025	.804 ± .025	.080 ± .075	.312 ± .065
Beta, Test 4.....	-.306 ± .033	.437 ± .036	.622 ± .047	.757 ± .015	.757 ± .015	.723 ± .024	.794 ± .022	.581 ± .028	.296 ± .040
New Stanford.....	-.265 ± .040	.535 ± .035	.552 ± .053	.723 ± .025	.566 ± .034	.566 ± .034	.595 ± .038	.529 ± .031	.428 ± .035
Thurstone (clerical).....	-.350 ± .047	.535 ± .035	.757 ± .025	.794 ± .022	.566 ± .034	.827 ± .017	.827 ± .017	.334 ± .045	.199 ± .049
Stenquist.....	-.274 ± .038	.574 ± .036	.804 ± .025	.794 ± .022	.595 ± .038	.334 ± .045	.278 ± .052	.278 ± .052	.272 ± .054
O'Connor Blocks.....	-.151 ± .039	.206 ± .051	.080 ± .075	.581 ± .028	.529 ± .031	.199 ± .049	.272 ± .054	.416 ± .038	.416 ± .038

room, with a separate desk for each man. The members of the one group secured from the day shelter organization were, however, tested within the organization's building. This, while quite commodious, was not always well-furnished with tables and chairs for the purpose. Nevertheless, groups were small, and on the whole no great

was dealt with by one examiner and, when necessary, one or two assistants.

In accordance with the original plans, efforts were made to secure a large and representative body of employed men to constitute a control group. This proved difficult, however, since in most cases testing had to be carried on outside of working

TABLE 2

Comparison of employed and unemployed clerical workers, showing the numbers tested, and for each variable the mean scores of the employed and of the unemployed, the difference between the means, the ratio of this difference to its standard error, and the skewness of the distributions

	NUMBER OF CASES		MEAN		DIFF.	DIFF. σ DIFF.	SKEWNESS	
	Em- ployed	Unem- ployed	Em- ploped	Unem- ployed			Em- ployed	Unem- ployed
Age.....	129	193	30.0	26.0	4.0	4.1	-0.756	-1.304
Education.....	114	186	9.6	8.8	0.8	3.7	0.403	1.200
Beta.....	135	97	97.4	94.2	3.0	2.0	0.318	0.052
Beta, Test 4 (Formboard).....	135	97	12.0	10.9	1.1	2.3	-0.082	0.514
Thurstone (clerical).....	74	81	90.0	101.6	11.6	3.1	0.117	0.324
Bernreuter:								
B1-N.....	115	81	-74.1	-42.9	31.2	2.9	-0.469	-0.332
B2-S.....	115	81	56.9	34.9	22.0	3.0	-0.297	0.111
B4-D.....	115	81	61.5	37.5	24.0	2.9	-0.207	-0.184
Stenquist.....	48	75	60.2	53.3	6.9	2.5	0.232	0.054
Study of values:								
Theoretical.....	38	92	29.2	31.3	2.1	1.7	-0.669	0.181
Economic.....	38	92	32.2	33.1	0.9	0.6	-0.039	-0.122
Aesthetic.....	38	92	25.1	22.6	2.5	1.5	-1.095	0.380
Social.....	38	92	30.8	29.9	0.9	0.8	-0.110	0.627
Political.....	38	92	32.7	32.5	0.2	0.1	-0.449	0.293
Religious.....	38	92	30.3	30.9	0.6	0.3	Nil	0.169

inconvenience was suffered. For individual examination a private office, research room, or laboratory was always available. This portion of the work was therefore always carried on under satisfactory conditions. Periods of group testing lasted from one to two hours per day for two to four days, several days apart. Ten to sixty men ordinarily constituted a group, which

hours, and on the basis of the voluntary consent and interest of each man. Twenty firms were approached and asked to place the matter before their employees, and of this number ten were represented by 350 employees. Tests were administered to 200 of these either in the evening in a classroom, or at noon or immediately after work in a room provided by the firm and

generally quite satisfactory for the purpose. The remainder, composed of a group of 60 insurance clerks and a group of 90 street-car operators, conductors and maintenance mechanical crew, were tested during working hours under favorable conditions and with the full coöperation of the company management.

A full report of the results obtained to the end of the current academic

to its standard error, and the Pearson coefficients of skewness of the distributions⁵ are given. The employed as a group were significantly older than the unemployed in this instance, and had received a greater number of grades of education. The employed also had significantly better clerical test scores, and exhibited significant differences on three of the scales of the Bernreuter Inventory. Differences in the Beta

TABLE 3

Mean scores for each of seven classes of occupations

VARIABLE	OCCUPATIONAL CLASS						
	A	B1	B2	B3	C	D	E
Age.....	39.5	32.0	29.1	34.3	34.5	33.8	34.0
Education.....	14.1	10.0	8.8	8.8	7.2	6.7	5.3
Otis.....	47.7	45.1	43.8	41.4	38.7	33.3	
Beta.....	97.3	98.0	93.0	83.7	79.1	73.9	62.0
Beta, Test 4 (Formboard)...	13.3	13.5	10.9	10.3	9.9	8.5	7.2
Thurstone*.....	93.0	97.7	103.8	106.7	133.1	162.9	
New Stanford.....	111.3	111.3	106.7	102.6	98.7	91.8	
Bernreuter:							
B1-N.....	-34.4	-34.2	-49.3	-66.9	-49.3	-31.9	
B2-S.....	69.1	33.2	39.2	69.7	44.5	39.5	
B4-D.....	51.3	51.4	40.1	69.7	38.9	31.5	
Stenquist.....	66.3	71.3	53.2	54.8	61.0	53.3	44.0
O'Connor Blocks†.....		2.80	4.75	3.75	2.50	4.75	3.90

* The score upon the Thurstone Clerical Examination is derived by adding the number of errors made (weighted for each sub-test) and the number of minutes required to complete the entire test. Hence the better scores are the lower ones.

† For mean, read median.

year (1933-34) will not be forthcoming until the close of the session. An analysis of the data secured to the end of the session 1932-33 has been made, however, and sufficient data to indicate the general trend of the research may be shown here. Table 2 represents a typical comparison of the test-scores of employed and unemployed clerical workers. For each variable the populations, means, the difference between the means, the ratio of the difference

Examination and the Stenquist Mechanical Aptitude Test were not fully significant, but were in favor of the employed group. Differences in interests of the type dealt with by the Allport-Vernon Study of Values were small and unreliable.

Table 3 shows mean scores for seven

⁵ Holzinger, K. J. *Statistical Method for Students in Education*, Ginn, 1928. Formula

$$26. \text{ Sk} = \frac{3(M - Md)}{\sigma}$$

classes of occupations, grouped on the basis of a modified Taussig scale, thus:

- A—Higher professional and executive
- B1—Technical (draftsmen, industrial chemists, etc.)
- B2—Clerical (Accountants, book-keepers, clerks, etc.)
- B3—Sales (Salesman and sales-clerks, advertising agents, etc.)
- C—Skilled (Machinists, mechanics, plumbers, etc.)
- D—Semi-skilled (Shippers, servants, orderlies, etc.)
- E—Unskilled (Farm-helpers, laborers)

Age shows no distinctive trend throughout the seven occupational grades. Intelligence test scores, clerical test and educational achievement test scores, and the number of school-grades completed, however, tend steadily downward. The scores on the emotional stability and dominance-submission scales of the Bernreuter Personality Inventory are higher for the sales group than for any other group. The highest Stenquist Mechanical Aptitude Test and O'Connor Wiggly Block scores are found for the two grades of occupations predominantly mechanical, namely, the technical (B1) and skilled (C) groups. Some of these differences are quite significant, and a number probably so, while a few are totally insignificant. The critical ratio of the difference

between each pair of means to the standard error of the difference varies from zero to 11.6.

These results suggest the desirability of further research within this field. The present data have for the most part been too sparse to make it possible to deal with single occupations. It is within the field of individual occupations that research should eventually go, however, in order to study the uniqueness and overlapping of job requirements. Particularly desirable in further investigations would be the accompanying use of trade tests or some other means of checking trade status. Within a given occupation, the wide spread of test scores can probably be attributed in part to the uneven trade status of the individuals included. Furthermore, where an individual has followed two or three occupations, but claims only one (as, for example, the last), the aptness of his choice may sometimes be questioned.

The present data do show, however, that employed clerical workers are older than unemployed, have had more education, and have more clerical ability. They show also a definite progression of intelligence, clerical, and educational achievement test scores up an occupational hierarchy of seven classes.

News Notes

FEDERATION CONFERENCE POSTPONED

Personnel Research Federation

The Thirteenth Annual Conference of the Personnel Research Federation, previously scheduled for November 15 and 16, has been postponed. It will be held early in the coming year, when the Federation's new Industrial Department has been more completely organized.

OLD AGE DEPENDENCE

The Citizens' Committee on Old Age Security for the District of Columbia recently made an investigation to find the extent of old age dependency. Their house-to-house enumeration of persons 65 years of age and over, revealed that 44 per cent were dependent on friends, relatives, or public or private relief, and 52 per cent were economically independent. (Four per cent did not report.) The study was made to obtain a basis for estimating the probable cost of an old-age pension system for the District.

EXPERIENCE WITH PUBLIC EMPLOYMENT SERVICES

The importance of an efficient nationwide employment service, not only for placement but for administration work in connection with the social insurances, is the theme of a series of studies being issued by Industrial Relations Counselors, Inc., of Rockefeller Center, New York City.

In his foreword to the first study, entitled "The Employment Exchange Service of Great Britain," the Right Honorable Winston S. Churchill asserts that the British employment exchanges have been outstandingly successful. The volume itself, written by two officials of the British Ministry of Labor concerned with the supervision and administration of the system, T. S.

Chegwidden and G. Myrddin-Evans, gives support to Mr. Churchill's assertion.

Industrial Relations Counselors, Inc., regards the first study and, indeed, the whole series, as especially timely now that the President has announced that a broad social insurance program is to be developed. The organization feels that American experience with state employment offices over a period of forty years has been none too encouraging and has raised some doubt as to the practicability of building up an efficient federal-state employment service under the Wagner-Peyser Act passed in 1933. They find representative Americans asking what social return may be expected from the annual expenditure of the four millions of federal money provided for in the act and a possible additional expenditure of three millions by the states.

This series, indicating the measure of success experienced by other countries in similar ventures and describing the administrative methods of the principal foreign systems, will assist the United States in constructing the best possible employment service. The organization stresses the importance of the study not only by reason of the cost of this important venture under the New Deal and its possibilities in restoring millions to employment in the next few years, but especially because the success of the social insurance system the President has forecast must depend largely on effective placement and assumption of much of the administrative work of unemployment insurance by the United States Employment Service.

The volume just issued affords a comprehensive view of the structure and operation of the British employment exchanges. The system, which is in charge of the Ministry of Labour, is in seven territorial divisions and includes 420 separate full-time employment offices, and 747 branch offices, staffed

on a part-time basis. The services of all of these offices are entirely free of charge. In recent years the work of the exchanges has greatly expanded. In the last decade, the yearly average number of workers registered as unemployed never fell below 1,000,000 and in 1932 was nearly 2,800,000. In 1922 the vacancies notified numbered 861,000; in 1932, 2,000,000. In the former year, 717,000 vacancies were filled and in the latter, 1,855,000.

INDUSTRIAL HEALTH RESEARCH BOARD

The Fourteenth Annual Report of Great Britain's *Industrial Health Research Board*, now available, describes a wide variety of physiological and psychological researches recently completed or still in progress. These include studies of the effect of increased illumination on tile-pressers' output, studies of the effects of noise, dust, temperature, vibration, monotonous work, and other conditions of work, and investigations into methods of measuring vocational suitability and accident proneness.

THE COST OF GOING TO COLLEGE

The Cost of Going to College is the latest pamphlet of the useful series prepared by the United States Office of Education. It gives the cost of tuition, special fees, room and board, incidentals, and total minimum and typical costs of attending practically

any college in the country. Loan funds, scholarships, and fellowships are described.

This pamphlet, prepared by Walter J. Greenleaf, may be obtained from the Superintendent of Documents, Washington, D. C., at five cents a copy.

PITKIN ON WORK OPPORTUNITIES

In connection with his regular radio broadcasts, Walter B. Pitkin now releases a bulletin called *The Clearing House of Hope*. It cites training, work, and apprenticeship opportunities, as well as general occupational gossip.

Pitkin's appraisal of "overcrowded" and "hopeful" occupations, as described in his recent book, *New Careers for Youth*, should be a healthy influence even if it is inaccurate in many particulars. Some of the fields judged to be overcrowded are: professional music, law, architecture, medicine, dentistry, nursing, the ministry, journalism, library and social work, aviation, and mining engineering. Some of the "hopeful fields" are vocational guidance, applied psychology, market research, salesmanship, banking, cost accounting, retail store management, and industrial art.

Mr. Pitkin's wide popularity may have a real influence on occupational redistribution. It is a pity that no one can supply him with scientifically ascertained facts of trends in the occupational demand for workers.

Personnel Books

EDITED BY O. MILTON HALL

THE PLIGHT OF THE BITUMINOUS COAL MINER

By Homer Lawrence Morris. Philadelphia: University of Pennsylvania Press, 1934, 253 pages, \$3.00

Reviewed by EDWARD S. COWDRICK, *New York*

When a few years ago the Industrial Transference Board of Great Britain reported that there were 200,000 coal miners in that country who never again would be needed in the pits, many Americans looked upon this condition as an appalling evidence of economic decay in a once dominant industrial nation. Now the same situation confronts the United States. In fact, 200,000 is the figure used by Professor Morris in estimating the permanent surplus of men seeking to earn their living in the bituminous mines. It is true that not all of these 200,000 are always the same men. One miner may have a job this year, another next year. One job may be spread out so that it furnishes a bare subsistence to several families. For a very large proportion of the unemployed miners, however, the future holds utterly no hope except through migration, new occupations, or charity.

The processes by which this situation came about are traced interestingly and authoritatively in Professor Morris' book. Some of the causes were inherent in physical and economic conditions; others were man-made. New Dealers cannot point to bituminous coal mining as an industry that went crazy in 1929. The over-expansion which turned out to be the most damaging took place during the war, when miners and operators were implored to get out more coal as a patriotic service. Throughout most of the decade of the 1920's the industry was struggling for its very existence. It did not abuse prosperity, because it had none.

For statistical and general data, the

author of *The Plight of the Bituminous Coal Miner* leans heavily upon earlier studies, particularly the report of the United States Coal Commission. His original contribution is the record of a first-hand investigation of conditions in West Virginia and Kentucky, financed by the Social Science Department of Fisk University, the American Friends Service Committee and the Social Science Research Council. In this study he interviewed almost 1,000 unemployed or part-time miners, representing families totalling almost 5,000 persons. His purpose was to secure reliable information on the character, ability, training and experience of the jobless men, and on their reactions toward their economic and social environment.

The regions selected for the study are the most picturesque and interesting, although possibly not the most typical, in the whole coal mining industry. It was mainly in Kentucky and West Virginia that the mines drew their labor supply from the native white population of the back-woods mountain farms, luring the "hillbillies" with promises of money wages which to them represented unlimited wealth. Now many of those same mountaineers and their sons, weaned from the land and from the primitive methods of life which had sufficed for their ancestors, are squatting idly around abandoned tipples, jobless and hopeless, their native independence sapped by months of charity and half-starvation.

It was to these miners that Professor Morris went with his inquiries. Where had they come from? Where did they intend

to go? How did they expect to support their families? What were their feelings toward their employers, toward unionism, toward the government, toward religion, toward communism? Answers to these questions, too varied and too voluminous to be adequately summarized in a brief review, form the most valuable part of the book.

It is encouraging to record that Professor Morris did not return from his investigation with a sure-fire remedy for the ills of the

bituminous industry. He gives qualified approval to several suggested programs, including restriction of entry into the miners' trade, vocational retraining, and part-time work on subsistence farms. He also favors unemployment benefits and old-age pensions. He is wise enough to realize, however, that the plight of the coal miner is due to causes lying deeper than labor policies, and that his economic rehabilitation must await a reorganization of the industry.

APPLIED PSYCHOLOGY

By Richard Wellington Husband. New York, Harper, 1934, 654 pp., \$2.90

Reviewed by ARTHUR W. KORNHAUSER, *University of Chicago*

This is decidedly an undergraduate textbook. It belongs to the large class of volumes prepared for the average student of the average college. It supplies a useful bird's-eye view of the field, but is inadequate, and inaccurate if one is seeking a reasonably thorough understanding of any one topic. It is comprehensive, sketchy, descriptive, uncritical. The treatment follows more or less the usual categories, but with more extensive consideration of vocational guidance and other matters of direct interest to the college student than is ordinary. The principal topics are: vocational guidance, employment procedures, personnel management and labor relations, fatigue, scientific management, advertising and selling, college personnel, and applications of psychology in law, medicine, athletics, and personal efficiency.

Each topic is treated as a separate unit. No attempt is made to outline principles or to establish methods applicable through the whole range of problems. Professor Husband clearly is not concerned about "fundamentals" of applied psychology. He discusses rather the practical problems and procedures in each field, using whatever scientific knowledge, common sense views, and personal opinions he finds convenient. There is little emphasis on method and little encouragement of critical thought or penetrating psychological interpretation. Interesting results from previous psycho-

logical studies are summarized on many points, but other equally good and sometimes conflicting material is unfortunately omitted. More serious than these omissions are the rather numerous cases of partial or misleading interpretation and the offering of superficial opinions as though they were accepted truths. However, enough sound material remains to give the reader a fair introductory view of the problems and methods of applied psychology.

As textbooks go, perhaps this one is reasonably good. It will provide a first sketchy understanding of vocational guidance, personnel management, advertising procedures, and so on, for the student who is unfamiliar with these fields—though this background knowledge will appear amateurish to those who know the fields intimately. Likewise the volume does give samples of psychological research methods and psychological analyses—however lacking in depth and rigor they may be. Perhaps this is what the average student wants. Conceivably it is what he should have, though I, for one, have grave doubts. Certainly the serious student of human problems, non-academic as well as academic, can find more mature and more valuable books on applied psychology. True, no one of them may cover the whole wide range of Professor Husband's book. Possibly that is one reason why they are more worth reading.

PRINCIPLES AND METHODS OF VOCATIONAL CHOICE

By Maurice J. Neuberg. New York: Prentice-Hall, 1934, 302 pp., \$2.25

Reviewed by GARRET L. BERGEN, *Adjustment Service of New York*

This new textbook drives home the thesis that it is more important for a student to learn how to secure vocational information than to memorize facts about vocations. The book reflects the experience of the author in developing and teaching courses in vocational choice at Wittenberg College.

A preliminary section of the book entitled, "A Method for Teaching this Course," suggests the use of the project method. Based on the "learning by doing" principle, this plan requires that the student himself, throughout the course, gather information about his tentatively chosen occupation.

The subject is approached indirectly through an extended (75 page) exposition of the need for vocational guidance, the historical background of the vocational guidance movement in the United States and in Europe, and the aim of education in general.

The remainder of the book presents what the author considers the three bases of vocational choice—the motive for choosing a vocation; vocational information; and personal information. Under vocational information, the author suggests an outline for studying an occupation and discusses various informational sources. The chapters on personal information explode fortune-telling methods in customary style and attempt to appraise the use of more scien-

tific devices such as tests, interest inventories, and rating scales. Dr. Neuberg cites his own "behavior-gram" or rating scale which he has found to possess prognosticating value. This is interesting enough to pique the reader's interest in seeing data regarding its reliability and validity.

The final chapter is concerned with "Preparing for, Entering upon and Progressing in the Vocation."

The book is sprinkled liberally with the research results of various investigators and Dr. Neuberg's own studies made during his six years' experience at Wittenberg.

The appendices should be helpful both to the student and to the instructor. These include: a partial list of occupations, a classified bibliography of tests, a list of books on over 30 individual occupations, and an interesting bibliography of biographies. (The author recommends bibliographical reading as one approach to vocational information.)

It is the opinion of the reviewer that the material presented in this textbook offers little direct help to the student seeking to guide himself vocationally. The usefulness of a course based on this textbook is likely to depend largely upon the ability of the instructor himself to stimulate interest, his judgment in selecting material for study, and his ingenuity in planning the project work.

VOCATIONS

VOCATIONS: THE WORLD'S WORK AND ITS WORKERS. (Revised Edition.) By William M. Proctor. Boston: Houghton Mifflin, 1934, 400 pp., \$1.50

Reviewed by LEONARD M. MILLER, *Nyack*

For a revised and enlarged edition this book is disappointing. Employment conditions and salaries have changed radically since the first edition appeared in 1929. One would, therefore, expect to find in this

revision a more accurate picture of present day employment problems, more references to trends in occupational demands and new types of training needed.

The main revisions consist of substitut-

ing the 1930 census figures in place of the 1920 statistics and the addition of eight pages in a new chapter on Leisure-Time Activities.

In his opening chapter the author points out that "before deciding to prepare for an occupation it is therefore wise to find out if possible whether it is a vocation which is likely to increase or decrease in importance." But he loses many opportunities to show how trends may be observed; as, for instance, in Transportation. He quotes the same figures which appeared in the first edition and which were gathered in 1925 and 1927. He does not amplify the new training and demand for workers in Bus Transportation. Similar comparisons are lacking on trends in Radio, Electricity, Aviation, Agriculture and other occupations where demands for men and women workers have changed in recent years.

There are many instances where the 1920 figures remain as in the first edition. Too often when 1930 figures are given, the 1920

figures are dropped entirely, again destroying the effectiveness of comparative studies.

Perhaps even more disappointing is the fact that the author in no case has revised salary figures as they appeared in the 1929 edition. This gives young people somewhat misleading information about minimum and maximum salaries since 1929. It has been years since salaries such as are quoted have been earned and it is doubtful when, if ever, they will be a reality again.

Only one new reference book is cited and this is not included in the Bibliography at the end of the book.

Even with these omissions the book is one of the most up-to-date books available on occupations.

It has been an extremely popular source book for both pupil and teacher and especially for the pupil. It has held and will hold its place among the best books in the field. Teachers will find the "Seek-Further Questions and Suggestions" section of each chapter especially helpful.

GROUP GUIDANCE

SELF-MEASUREMENT PROJECTS IN GROUP GUIDANCE (Vol. iii, Inor Group Guidance Series.

By Richard D. Allen. New York: Inor Publishing Co., 1934, 274 pp., \$2.25

ORGANIZATION AND SUPERVISION OF GUIDANCE IN PUBLIC EDUCATION (Vol. IV, Inor Group Guidance Series). By Richard D. Allen, New York: Inor Publishing

Company, 1934, 420 pp., \$3.65

Reviewed by ROY N. ANDERSON, *Columbia University*

In *Self-Measurement Projects in Group Guidance*, Dr. Allen provides the counselor with some of the tools and techniques which are so essential in the study of individuals. A new approach is suggested by the author. He wants to get away from the old idea that tests are something to be dreaded, shunned and feared and that the counselor does something "to" individuals. It is rather that the counselor does something "with" the individuals. He advocates that the testing program be converted into a group-guidance technique in which the pupil measures himself and discusses the possible implications of the resulting data. The author puts forth clear-cut reasons as to the

advantages of such a program to the counselors and the pupils.

The book is organized on a project basis consisting of 63 different self-measurement projects. A detailed outline of the method of procedure is given with each project to guide the counselor in getting the most effective results.

The treatment of each unit is as follows:
Statement of Problem

I. Preparation of the counselor

1. Statement of the objectives of the project
2. References for the counselor
3. Materials required for the project

- II. Suggestions for motivation
- III. Administration of the test
- IV. Issues and implications
- V. Possible by-products
 - 1. A continuous survey
 - 2. Records of growth for each class and for the school
 - 3. Improvement of the curriculum and instruction
 - 4. Effects of the project on attitudes and standards

The projects covered are mostly tests of academic achievement but other types included are: personal adjustment, general intelligence, interest, information and experience, personality and attitudes, and vocations.

The author very emphatically points out that, "testing is not necessarily guidance, but that it may be needed for guidance purposes to help pupils to know and understand themselves." This volume should therefore be an indispensable manual to trained counselors and those in training.

The reviewer cannot emphasize too strongly the authors warning: "They (the tests) must still be considered experimental and tentative and should be used more as a teaching device than as tools of measurement."

Many counselors and school administrators have been eagerly awaiting *Organization and Supervision of Guidance in Public Education*, because it embodies a philosophy of guidance that has been pragmatically tested and not found wanting. Dr. Allen gives a clear cut exposition of his concepts of a guidance program and how it actually functions in Providence, Rhode Island.

Appearing in the volume time and again

as the warp of his tapestry you will find what Dr. Allen considers the functions of guidance. They are: (1) personnel records and research; (2) counseling, and (3) orientation and group guidance.

Counselors should find in this volume many helpful suggestions in program building, interviewing techniques, record keeping as an aid to creative work, samples of material which have appeared in other volumes such as: *Common Problems in Group Guidance*, *Case-Conference Method*, and *Self-Measurement as a Group Guidance Technique*. There is also a very good description of procedures in conducting follow-up surveys.

The principal and administrator should find in this volume challenging possibilities by which the school can be made more effective. There is a thorough discussion of the organization of guidance in the junior and senior high school, continuation school, vocational school, and public evening school. In fact Dr. Allen devotes a number of pages to "A Guidance Program That Any High School Principal May Undertake." The volume is well documented with charts illustrating the functions and organization of a guidance program, the selection and training of counselors, and follow-up surveys, as well as copies of the various forms and records that have evolved from day-to-day experience.

This is a volume that needs to be read not only by counselors who are now on the job, and prospective counselors in training, but also by principals, superintendents and supervisors. As John M. Brewer, who wrote the introduction, says, "It should prove indispensable for all who are interested in organizing a more vital school."

THE CHANCE OF A LIFETIME

By Walter B. Pitkin. New York: Simon and Schuster, 1934, 282 pp., \$2.00

Reviewed by ELIZABETH SLOCOMBE, *New York*

America is full of obsolescent machines, money, men, cities, morals. Youth must cut itself free of all these to save itself.

Mr. Pitkin has turned promoter for youth. His new book, addressed to the 35,000,000

young people of this generation is a handbook giving ways and means of obtaining "the right to live more abundantly . . . before it is too late."

A definition of abundant life might well

defeat many people but Mr. Pitkin neatly defines it under ten headings all of which assume a good job and a good home. To obtain these, youth must organize to form self-supporting communities. The money to start these communities must be obtained from the government as loans.

No form of communism is to be contemplated and the present constitution is to be kept.

Subsistence homesteads are the hope of the lost generation. Not "havens of the desperate" nor communities of hill-billies "scratching barren hillsides with dusty hoes," but well managed, prosperous, highly technological communities. The author's hobbies are super-power and technology.

The book has many excellent qualities. It is frank, honest, never descends to petty issues, is never vague, proves its points by statistics. It is written to appeal to youth by a master of that art. Yet it is not entirely convincing.

For this plan, like all such plans, demands a certain type of leadership, optimism, and energy, which perhaps only the author possesses. But there is only one W. B. Pitkin.

Mr. Pitkin is remarkably close to the psychology of this country, so close indeed that he can sense its trend six months ahead. It is exceedingly hopeful then that his new book deals not with the "wretched philosophy of scarcity" but shows that a richer life can be organized where machines do more rather than less work.

WOMEN AND WEALTH

By Mary Sydney Branch, Chicago: University of Chicago Press, 1934, 153 pp., \$2.00

Reviewed by AGNES B. LEAHY, *Personnel Director, Girl Scouts, Inc.*

The economic status of women is changed. We all had suspected the truth of this statement some time ago, but Mary Sydney Branch proves this in her study *Women and Wealth*, made under the auspices of the Chi Omega Service Fund.

Consider, for example, the extraordinary, even startling, figures this little volume presents. More than 10,000,000 women—over one-fourth of the nation's adult female population—are engaged in remunerative work. Women receive more than two-thirds of all legacies from estates, and over eighty per cent annually of death claims paid by life insurance companies. Women are named beneficiaries of about \$87,200,000,000 of the \$109,000,000 of life insurance outstanding. And that is not all! What women do not earn or inherit, they control directly and indirectly through family finances, so they represent approximately eighty per cent of the buying power of the nation.

Rightly Miss Branch is not satisfied with taking the accepted criteria of measurement of economic position, i.e., income received, and property owned. In the matter of in-

come received, she prefers to analyze the way it is received, the matters of dependents, and social claims upon income. She refines and elaborates the meaning of property owned. As a result, she discusses her subject logically and well under the headings: (1) Women as Taxpayers, (2) Women as Owners of Property, (3) Women as Gainfully Occupied Workers, (4) Women as Buyers and Managers of Family Income. With these four topics as chapter headings, the study reveals, in great detail, impressive figures on the possession of the wealth of this country.

Her numerous tables—65 all together, some of which cover two pages—give authenticity to facts, and indicate thoroughness. In a number of cases they show new and hitherto unnoticed distinctions between the economic positions of men and women. Her bibliographical references, and her knowledge of state laws give evidence of careful consideration of her material.

There is no doubt about the authenticity of her figures. The author is to be commended for the amount of labor involved in gathering such widespread and varied data.

Miss Branch says her aim is "to portray the economic status of women in the United States." Unfortunately, she does not stop at this but gives opinion and prophecy. She is partially justified in this because the note is struck for her in the brief foreword by the President of Chi Omega, "it would be fortunate if women in a democracy realized their economic position" and "it is hoped this study will stimulate the interest of women in the administration of government in corporate management, and in the economic and cultural value of consumer's goods." But this note, taken up by the author, soon becomes a battle cry, until the facts and figures are colored by emotion. This war-like attitude seems dictated by a strange inferiority complex and too often, in referring to women's status, such words as "handicapped," and "restricted" appear. Unjustifiable interpretations are made. We see, apart from figures, a desire to rally women to a cause.

It is highly debatable that occupational success is judged by the amount of salary received, particularly women's salaries compared with men's. It is even more debatable that the key to culture, control, and governmental legislation is money. I doubt if industries and corporations, whose stock is coming more and more into the hands of women, will be frightened by the bugaboo of power of these women. It is unfortunate that the author has the naïve belief that a transference of power from one sex to another will "build a better social and economic order."

As it stands, the collection and tabulation of data make this a worthwhile volume. It would have been sounder without interpretations. Had the "purpose" been omitted, a fine piece of research would have important sociological implications. The striking figures of the study, simply stated, ought to make women immediately and collectively aware of their considerable responsibility.

THE UNEMPLOYED MAN. By E. Wight Bakke. New York: E. P. Dutton, 1934, 308 pp., \$3.50

What has been the effect of Unemployment Insurance on the willingness and the ability of workers to support themselves?

Mr. Bakke set out to answer this extremely important question. To do so he took lodgings with a working class family in London and took part in the community life, attending meetings of lodges and churches, talking in "pubs," and joining in the hunt for jobs. All the time he made careful observations which might answer his question, and, as well, yield a picture of how unemployed men react to their situation. Although this method of investigation is too subjective to be accepted as entirely valid by social psychologists, the resulting human document indicates that the author approached his problem with a thoroughly scientific viewpoint. His report rings true.

I quote the author's central conclusion: "The behavior of the unemployed in searching for new employment gives no evidence

that the possibility of drawing Unemployment Insurance benefit has retarded the efforts of the unemployed to get back to work."

Furthermore, "there is evidence that Unemployment Insurance has alleviated the worst physical effects of unemployment. It has kept diet from falling to unhealthful levels; it has kept workers from falling in arrears on their rent . . . it has kept unrest at a minimum, the political agitation of Communists failing to flourish among those secure in the knowledge that the state is assisting them to help themselves. It has not relieved, however, and cannot by its very nature relieve, the mental and moral fatigue and discouragement which result from having no job. It cannot supply the loss of status and the sense of self-respect which vanish with the job."

FAITH, FEAR AND FORTUNES. By Daniel Starch. New York: Richard R. Smith, 1934, 226 pp., \$2.00

Although it has become platitudinous to say that The Depression is in no small part

"psychological," few psychologists have attempted a genuine analysis. Perhaps this is because not many well-trained psychologists have more than a nodding acquaintance with problems of the world outside university gates. In Dr. Starch is found, however, that rather rare combination of legitimate, scientifically trained psychologist and business man. This in itself is sufficient to recommend his book.

Dr. Starch analyzes the events of the years 1929 to 1934 in terms of human behavior. He suggests that most of the remedies offered to solve depressions have failed to gauge accurately the overwhelming force of crowd emotion. He suggests that in order to prevent depressions it is necessary to prevent booms, and that booms can be prevented only by checking and directing the national psychology. Among the seven methods of controlling booms and depressions which the author offers, is the creation of "A Supreme Economic Council" designed "to foster the formulation of sound psycho-economic philosophy and to give this philosophy authority with the masses in general and the business community in particular." This council would be made up of 75 leaders in various lines, including 45 business men and 5 psychologists.

Dr. Starch's book is decidedly worth careful study, yet this reviewer could not avoid the conviction that scientific psychology has a long way to go before it can really solve problems of the magnitude of booms and depressions.

PRINCIPLES OF INDUSTRIAL MANAGEMENT.

By E. A. Allcut. New York: Pitman, 1933, 218 pp., \$3.00.

This book gives a good over-all picture of modern industrial management, in less space than it has taken others to do the same job. Since the book was designed primarily for students, no attempt was made to describe the details of industrial administration. Up-to-date executives may be disappointed unless they seek only general knowledge of the principles of management.

As one must expect, the management of materials is much more adequately handled than the management of men, for the latter

is not so susceptible to scientific handling. Nevertheless, one gets the impression that the author is acquainted with a greater proportion of the available knowledge concerning mechanical engineering than of human engineering.

INDIVIDUAL DIFFERENCES. By Frank S. Freeman. New York: Holt, 1934, 355 pp., \$2.50.

One of psychology's most important topics, that of individual differences in human abilities, is here dealt with thoroughly and authoritatively. The factors affecting intellectual development and decline are discussed on the basis of an integration of the vast amount of experimental data relevant to this field. The book is addressed to students of education and psychology, and to educators and psychologists whose special interests are in other fields but who wish to become better acquainted with the subject of individual differences.

PSYCHOLOGY. By Robert S. Woodworth. New York: Holt, 1934, 546 pp., \$3.00.

For many years when the writer has been asked to recommend a sound introductory book on scientific psychology the answer ordinarily has been, "Woodworth's *Psychology*." And now that a thorough revision has been prepared, the answer is still the same.

The revision is in every way an improvement. Material has been brought up-to-date. In addition, a more logical order of presentation has been adopted. Superfluous theoretical discussion and expression of opinion has been dispensed with to make room for significant facts.

PRODUCTION TRENDS IN THE UNITED STATES SINCE 1870. By Arthur F. Burns. New York: National Bureau of Economic Research, 1934, 363 pp., \$3.50.

One hundred and four time series of the physical output of commodities and services are analyzed in this book, covering agriculture, fisheries, mining, manufacturing, construction, transportation and trade. In a study whose scope is as broad as this,

difficulty may be expected in obtaining, completeness.

The book contains 54 tables and 21 charts indicating the secular rates of growth and retardation and the degree of conformity of successive decade cycles within industries and between industries. Great care is used in extracting and refining the significant facts from the basic statistical material; limitations of the data are always clearly recognized. Dr. Burns carefully defines his terms and explains his methods so that the reader can critically follow his analysis. Since the Appendix contains tables of supporting data, with sources, their worth may also be evaluated by the reader.

This book is of value to the general student of economics as an aid in bettering his sense of value and proportion as regards industrial production trends, and to those who are interested in particular industries because of its clinical records of their growth and decadence. It is also of value in indicating the further possibilities of this method of approach to the problem of economic change.

CURRENT SOCIAL PROBLEMS. By John M. Gillette and James M. Reinhardt. New York: American Book Co., 1934, 819 pp., \$4.00.

The authors have brought together and integrated a vast amount of material (the book contains more than 800 pages) dealing with the more important "social problems" of the United States. After a preliminary general survey, these problems are presented: distribution of wealth, problems concerned with population, health and physical welfare, control and care of feeble-minded, insane, blind and cripple, crime, alcoholism, immigration, and many others.

Considering the wide range of topics dealt with, the presentation of most topics is detailed, and far from superficial. In view of this, it is surprising that public enemy no. 1, unemployment, is not more thoroughly handled.

HOME ROOM GUIDANCE. By Harry C. McKown. New York: McGraw-Hill, 1934, 447 pp., \$3.00

Is this just one more frill that is to be added to the school curriculum? On the contrary, we find that the home room has been an integral part of the educational system for the past two decades. In fact the literature about this phase of education has been so voluminous that the author has made a contribution by synthesizing and bringing together the best. It is seldom that in a single volume one finds as many concrete and helpful suggestions as Mr. McKown gives.

The first half of the book is devoted to the philosophy, purposes and principles of organization and administration of home room programs. The pages sparkle with practical suggestions. Take, for example, a few of the chapter headings: home room membership, internal organizations of the home room, selection and placement of home room program material, making the home room schedule and evaluating the program.

The last half of the book is devoted to program material and activities relating to particular phases of specialized guidance which may be carried on during this period. The topics covered are: orientation of pupils, educational planning, vocational guidance, moral and ethical guidance, personal relationships, manners and courtesy, guidance in citizenship and school citizenship, health guidance, recreational guidance and guidance in thrift. In each of these chapters the reader will find suggestions as to programs which have been tried out in numerous schools throughout the country. In addition, the author presents an abundance of selected references on each topic.

This volume with its encyclopedic information should be indispensable not only to those who have charge of home room programs in the school but also to everyone teaching children. It should be especially valuable to counselors in the schools.

New Books

- A CHANCE OF A LIFETIME.** By Walter B. Pitkin. New York: Simon and Schuster, 282 pp., \$2.00
- A DEMONSTRATION OF INDIVIDUALIZED TRAINING METHODS FOR MODERN OFFICE WORKERS.** By Edward G. Eriksen and others. Minneapolis: University of Minn. Press, 60 pp., \$1.00.
- A JOB ANALYSIS OF MANUFACTURING PLANTS IN MINNESOTA.** By Charles A. Koepke. Minneapolis: University of Minnesota Press, \$.50
- A REFERENCE GUIDE TO THE STUDY OF PUBLIC OPINION.** By Harwood L. Childs. Princeton: Princeton University, School of Public and International Affairs, 111 pp., \$2.00
- A STUDY OF THE NEEDS OF ADULTS FOR FURTHER TRAINING.** By M. R. Trabue and Beatrice J. Dvorak. Minneapolis: University of Minnesota Press, 25 pp., \$.50
- COMPARATIVE PSYCHOLOGY.** By E. L. Thorndike, and others. New York: Prentice-Hall, 1934, 529 pp., \$3.50.
- EMPLOYMENT EXCHANGE SERVICE OF GREAT BRITAIN.** By T. S. Chegwidden and G. Myrddin-Evans. New York: Industrial Relations Counselors, Inc., 324 pp., \$3.50
- GENERAL EXPERIMENTAL PSYCHOLOGY.** By Arthur G. Bills. New York: Longmans, 630 pp., \$4.00
- HOW TO INTERVIEW (Revised Edition).** By W. V. Bingham and B. V. Moore. New York: Harper, 324 pp., \$3.00
- INDIVIDUAL DIFFERENCES.** By Frank S. Freeman. New York: Holt, 366 pp., \$2.50
- INDUSTRIAL ARBITRATION IN THE BOOK AND JOB PRINTING INDUSTRY OF NEW YORK CITY.** By James F. Bogardus. Philadelphia: University of Pennsylvania Lib., 105 pp., gratis
- LABOR FACT BOOK.** By Labor Research Association. New York: International Publishers, 222 pp., \$2.00
- LEADERSHIP IN GROUP WORK.** By Henry M. Busch. New York: Association Press, 311 pp., \$2.25
- MEASURED CHARACTERISTICS OF CLERICAL WORKERS.** By Dorothy M. Andrew and Donald G. Paterson. Minneapolis: University of Minnesota Press, 60 pp., \$1.00
- NEW CAREERS FOR YOUTH.** By Walter B. Pitkin. New York: Simon & Schuster, 236 pp., \$1.50
- PRACTICAL BUSINESS STATISTICS.** By Frederick E. Croxton and Dudley J. Cowden. New York: Prentice-Hall, 529 pp., \$3.50
- PSYCHOLOGY;** 3rd ed. By Robert S. Woodworth. New York: Holt, 560 pp., \$2.50
- SOCIAL CHANGE AND SOCIAL PROBLEMS.** By James H. S. Bossard. New York: Harper, 798 pp., \$3.50
- SOCIAL SECURITY IN THE UNITED STATES, 1934.** New York: American Association for Social Security, 193 pp., \$1.75
- UNEMPLOYMENT FUNDS.** By Hugh H. Wolfenden. New York: Macmillan, 247 pp., \$2.50

Current Periodicals

PREPARED BY LINDA H. MORLEY, *Industrial Relations Counselors, Inc.*

EMPLOYEE REPRESENTATION

HOLLIDAY, W. T. Employee representation. *Personnel*, May, 1934, Vol. 10, p. 99-104.

An exposition of the experience of the Standard Oil Company of Ohio.

MERRILL, HARWOOD F. "Company union" vs. outside union: I. through the employer's eyes. *Forbes*, Mar. 15, 1934, Vol. 33, p. 9-11, 27-29.

Statement of the usual objections management has to trade unions.

MERRILL, HARWOOD F. "Company union" vs. outside union: II. through the workman's eyes. *Forbes*, Apr. 1, 1934, Vol. 33, p. 10-12, 22-23.

Data obtained from interviews with workers.

HEALTH

BRISTOL, LEVERETT D. (Health Director, American Telephone & Telegraph Co.). Industry and the future of medicine—the relations of industry to the newer developments in medical and hospital administration. *Industrial Medicine*, June, 1934, Vol. 3, p. 339-343.

The subject is discussed from the point of view of the worker, the doctor, the hospital and the community.

ROREM, C. RUFUS (Associate for Medical Service, Julius Rosenwald Fund). Medical care in the worker's budget. *Personnel*, May, 1934, Vol. 10, p. 110-116.

This paper was presented at the monthly meeting of the Industrial Relations Association of Chicago, January 8, 1934. Group health service plans of the Goodyear Tire and Rubber Company, the Homestake Mining Company and the

Endicott Johnson Shoe Company are explained.

SAPPINGTON, C. O. Problems in industrial medicine; a survey of some of the important phases of this subject which are entitled to present consideration. *Industrial Medicine*, June, 1934, Vol. 3, p. 329-338.

A general statement of the subject by an expert.

HOURS OF WORK

International Labour Office. Reduction of the working week in Germany. *International Labour Review*, June, 1934, Vol. 29, p. 765-783.

Since coming into power the National-Socialist Government in Germany has devoted much attention to reducing the volume of unemployment. Among the practical measures advocated for this purpose is the reduction of weekly hours of work. The Government has laid down a series of principles which aim at a better distribution of the available employment between the employed and the unemployed.

United States, Labor Statistics Bureau. Legal restrictions on hours of labor of men in the United States, as of January 1, 1934. *Monthly Labor Review*, Apr., 1934, Vol. 38, p. 831-834.

"This article shows in tabular form the legal restrictions on the hours of labor of men, as of January 1, 1934. It is a revision of similar analyses which appeared in the January, 1929 (p. 16) and January, 1933 (p. 1) issues of the *Monthly Labor Review*. No attempt has been made here to include either the rules and regulations of state labor departments, which in some

states have the force and effect of law, or the legislation limiting the hours of labor of bus and truck drivers. The latter subject has been covered in the *Monthly Labor Review* for January, 1933 (p. 109) and a later report is now in preparation."

INDEX NUMBERS

LINDBERG, JOHN. Some problems in the construction of index numbers of unemployment. *International Labour Review*, Apr., 1934, Vol. 29, p. 472-499.

The author discusses in detail the character of the data used, methods of constructing index numbers and various problems arising out of their construction, especially the important question of seasonal unemployment.

United States, Labor Statistics Bureau. Method of computing price indexes. *Monthly Labor Review*, May, 1934, Vol. 38, p. 1252-1253.

General statement of the practice used in the United States Bureau of Labor Statistics.

INDUSTRIAL RELATIONS

National Industrial Conference Board, Inc. Labor relations, 1933-1934. *Conference Board Service Letter*, June 30, 1934, Vol. 7, p. 41-44.

A survey of events in the field of industrial relations during the year.

LABOR LEGISLATION

CHENEY, ALICE S. (International labor conventions. *Monthly Labor Review*, Apr., 1934, Vol. 38, p. 759-778.

Governments belonging to the International Labor organization have together registered 578 ratifications of 33 international labor conventions establishing minimum standards for labor laws or social legislation. Such conventions are adopted in draft form at the annual International Labour Conferences and then submitted to the treaty-making authorities of member governments for voluntary ratification or rejection. In this article general statements are given as to the method of adoption, the nature of the

commitments involved, the subjects dealt with, and the ratifications registered. These generalizations are followed by brief summaries of the draft conventions, together with their dates of adoption by the International Labor Conferences, the names of countries which have ratified each, and the number of ratifications.

JOHNSON, ETHEL M. Interstate compacts affecting labor. *American Labor Legislation Review*, June, 1934, Vol. 24, p. 71-73.

Summary of the history of this movement.

SPEEK, PETER A. New national labor law of Germany. *Monthly Labor Review*, May, 1934, Vol. 38, p. 1104-1116.

The national labor law of Germany, promulgated in January, 1934, provides for an entirely new plan of industrial relations. It abolishes the former system of collective agreements and sets up in its place a system under which the employer is regarded as the "leader" of the enterprise and the workers as "followers," acting together not only as fellow workers of an enterprise but for the benefit of the state as a whole. An English translation of the law is given in full.

United States. Labor Statistics Bureau. Labor legislation during 1933. *Monthly Labor Review*, Mar., 1934, Vol. 38, p. 559-577.

A classified summary with appropriate citations.

NATIONAL INDUSTRIAL RECOVERY ACT

American Federation of Labor. Guide to collective bargaining; principles of action established by the National Labor Board in the adjustment of labor disputes. *American Federation of Labor*, June, 1934, Vol. 41, p. 599-603.

The various rulings of the board digested for this particular aspect.

CLARK, J. M.: Economics and the National Recovery Administration. *American Economic Review*, Mar., 1934, Vol. 24, p. 11-25.

The Act is criticized as sacrificing a

revival in the field of capital equipment to sustain demand for consumers' goods. However, the securities act and monetary uncertainty contain more unmistakable handicaps, and the removal of obstacles in these fields may be sufficient. As to the NRA, danger lies not only in the raising of industrial costs, but in the measures taken to compensate by protecting profits.

Surplus labor will not soon disappear, even with revival, the development of the domestic market will not automatically keep pace with increasing productive power; hence, there is continuing need to deal with these problems and to attempt to base recovery more on diffused customer purchasing power and less on an inherently temporary boom in capital equipment.

The organization of the NRA, viewed as a social constitution for industry, is only a step, though in line with what is probably an inevitable development.

International Labour Office. Codes of fair competition and women's wages in the United States. *International Labour Review*, June, 1934, Vol. 29, p. 812-822.

A quite detailed analysis of the various code provisions compared with data for similar trades before they came under code regulation.

National Industrial Conference Board, Inc. Orders, cases and interpretations affecting labor relations. *Conference Board Service Letter*, May 30, 1934, Vol. 7, p. 36-37.

Two of these are on collective bargaining.

National Industrial Conference Board, Inc. Small plant under the N.I.R.A. *Conference Board Service Letter*, May 30, 1934, Vol. 7, p. 33-35.

Results of a questionnaire which sought to determine whether NRA is advantageous to the small plant, or the reverse. Replies were received from 360 companies.

PENSIONS

PARSONS, G. CHAUNCEY. Origin and development of the present crisis in industrial

pension plans. *Annalist*, May 25, 1934, Vol. 43, p. 811.

Historical survey. Definitions of eight terms are a useful contribution.

PARSONS, G. CHAUNCEY. How and why annuity and other pension plans have failed: the alternative. *Annalist*, June 8, 1934, Vol. 43, p. 885, 910.

The writer advocates using the "insured" plan because of its greater security.

PARSONS, G. CHAUNCEY. Basic principles and specific details of a sound industrial pension plan. *Annalist*, June 15, 1934, Vol. 43, p. 916-917.

A brief outline of the procedure for installing a plan.

PSYCHOLOGY

UHRBROCK, RICHARD STEPHEN. Importance of psychology—its bearing on the efficiency, well-being and happiness of employees. *Industrial Medicine*, Feb., 1934, Vol. 3, p. 60-70.

The importance of certain mental and ability tests is emphasized. Some tests are described.

SAFETY

United States, Labor Statistics Bureau. Protection to life and health of union members provided for in collective agreements. *Monthly Labor Review*, March, 1934, Vol. 38, p. 545-549.

About 350 of some 700 collective agreements analyzed with respect to this point make some provision for the prevention of injury and ill health in industry. The analysis is arranged by occupation.

SALARIES

BROWN, WILLARD. Salaries and bonuses paid by 53 industrial and public utility companies, 1928-1933. *Annalist*, June 22, 1934, Vol. 43, p. 950-952.

The statistics show the salary of the president separately in each case, the rest of the officers put into one total, the net income, dividends paid and the per cent of net income of the salaries and dividends.

PAYNE, PHILIP M. Corporation salaries and bonuses and the federal revenue act of 1934. *Annalist*, June 22, 1934, Vol. 43, p. 949-950.

Analysis of the decisions that have been handed down on this subject.

CROXTON, FRED C., AND FRANK C. CROXTON. Average wage and salary payments in wholesale and retail trade in Ohio, 1916 to 1932. *Monthly Labor Review*, May 1934, Vol. 38, p. 1032-1046.

The highest average annual wage and salary payment to wage earners in wholesale and retail trade in Ohio in any year from 1916 to 1932 was \$1,293 in 1928 and the lowest \$671 in 1916. For bookkeepers, stenographers, and office clerks, the highest average was \$1,405 in 1930 and the lowest \$723 in 1916; for salespeople (not traveling) the highest was \$1,238 in 1927 and the lowest \$656 in 1916. These figures are based on annual reports to the Ohio Department of Industrial Relations.

TRAINING

TUKEY, HARRY H. Get ready to train. *Personnel*, May, 1934, Vol. 10, p. 120-127.

A plea for a well defined re-training program giving many reasons for its importance at the present time.

UNEMPLOYMENT

National Industrial Conference Board, Inc. Receding unemployment. *Conference Board Bulletin*, June 10, 1934, Vol. 8, p. 41-43.

Statistical analysis of the several estimates of the number of unemployed.

UNEMPLOYMENT INSURANCE

American Association for Labor Legislation. Unemployment insurance bills of 1934. *American Labor Legislation Review*, June, 1934, Vol. 24, p. 63-66.

Analysis of 40 bills introduced in Congress and state legislatures.

FOWLER, CHARLES BURNELL. American unemployment insurance legislation. *American Federationist*, June, 1934, Vol. 41, p. 619-630.

This article is historical in nature and also analyzes the different bills that have been introduced.

WORKMEN'S COMPENSATION

JONES, F. ROBERTSON. Workmen's compensation—a growing burden on industry. *Industrial Medicine*, May, 1934, Vol. 3, p. 314-317.

The author discusses many points which he feels are causing difficulty in the administration of workmen's compensation laws.

United States, Labor Statistics Bureau. Workmen's compensation legislation in the United States and Canada in 1933. *Monthly Labor Review*, Apr. 1934, Vol. 38, p. 840-852. A summary arranged by State with the necessary citations.

Measuring the Industrial Safety Program

BY LEVERETT D. BRISTOL, M.D., *Health Director, American Telephone and Telegraph Company, New York*

If an Industrial Safety Program is not working right, the record of accidents soon tells the story. But it does not tell 'why'. The device which Dr. Bristol describes should aid in locating strong and weak points in a safety program, as well as in general appraisal.

THE best yardstick with which to measure the success or failure of an accident prevention program is the statistical record of decrease or increase in the number of accidents. Concrete end results are the things which count. Accident prevention and safety work have been the most enthusiastically supported of all personnel activities in industry largely because their results can be measured and appraised. In spite of the ease of determining the end results of accident prevention work, may it not also be desirable to have some yardstick or rating schedule to measure company effort, total performance, completeness and progress of programs in the industrial safety field? To this end there is suggested herein a device for measuring the industrial safety program itself.

THE APPRAISAL METHOD

The appraisal or scoring method in general has been adapted to various fields of human activity. One of the first interesting applications of this method was that developed by the National Board of Fire Underwriters

in the form of a "Standard Schedule for Grading Cities and Towns of the United States with Reference to Their Fire Defenses and Physical Conditions," which was adopted in 1916. This schedule logically attempts to rate and grade communities not on the negative side of the problem—the number and extent of fires—but from the positive, preventive standpoint of fire defense and physical conditions. This appraisal method also has been applied to state, city and county health work, under the leadership of the Committee on Administrative Practice of the American Public Health Association.

In 1932 the writer¹ developed an original Appraisal Form or Rating Schedule for Industrial Health Service in general, and, in addition, outlined a form to cover the possible scoring of the entire personnel and industrial relations program. These forms were further elaborated by the writer²

¹ Bristol, L. D. An Appraisal Form for Industrial Health Service, *Am. Jour. Pub. Health*, 1932, 22: 1263.

² Bristol, L. D. Appraisal of Industrial Health Activities, *Ind. Med.*, 1933, 2: 85.

in 1933. The object of the present paper is to emphasize the possibility also of extending the appraisal idea in more detail to the measurement of the accident prevention and safety program. The sections, subdivisions and assigned values in this plan are not considered final, and are subject to revision on the basis of group judgment. Moreover, no attempt is made to list all the possible activities and values under each subdivision. These are left for future development.

According to the writer's Appraisal Form,³ *Personnel and Industrial Relations Service* in general may be divided into five chief sections as follows: (1) Employment Activities, (2) Educational Activities, (3) Economic Activities, (4) Health and Safety Activities, and (5) Coöperative Activities. In this plan, each section has been assigned a rated value of 1,000, making up a maximum total score of 5,000. The part of the total personnel and industrial relations program which should be given over to an *industrial health service* has been divided further into the following activities, with their respective assigned values:

A. Vital Statistics Activities..	75
B. Communicable Disease Control.....	150
C. Tuberculosis Control.....	100
D. Occupational Disease and Accident Control.....	200
E. Personal and Environmental Hygiene.....	400
F. General Health Publicity..	75

Thus the maximum total score for a complete industrial health and safety

service is 1,000. For further details of these original schedules, reference should be made to the publications previously mentioned.

APPRAISAL FORM FOR OCCUPATIONAL DISEASE AND ACCIDENT PREVENTION SERVICE

Based on the assumption that at least one-fifth (or a total assigned score of 200 out of 1,000) of the health and safety program of an industry should be given over to the prevention and control of industrial accidents and occupational diseases, table 1 gives a brief summary of the sections, subdivisions and assigned values of a proposed Appraisal Form for an Industrial Safety Service, particularly in larger industries. Reference is not made in this table to such important activities and facilities as pre-employment physical examinations, selection of employees, illumination, ventilation, sanitation and rehabilitation because these, and others that might be listed, are factors related to the entire health or personnel program and are included in the writer's more general appraisal forms referred to above.

Those wishing to make use of such a form for scoring purposes could have it made up with the necessary blank columns for filling in the recorded values, or scores, opposite the maximum assigned values. In the future evolution of such an appraisal form the values and scoring should become more and more objective, based upon accurate records. Until then, carefully controlled opinion and judgment must be the basis for comparative scoring.

The major advantages of this

³ Bristol, L. D. *Industrial Health Service*. Philadelphia: Lea and Febiger, 1933.

TABLE 1

Sections, subdivisions and assigned values of proposed appraisal form for an industrial safety service in larger industries

SECTIONS AND SUBDIVISIONS	ASSIGNED VALUES
A. Records, Case Investigations and Reports	30
1. Complete investigation and report of each case of occupational disease, poisoning or accident	10
2. Records, giving name, address, occupation, date, cause, time lost and costs filed in a ledger book or card file	10
3. Essential facts of each case analyzed and correlated with information as to possible source, cause and future prevention	6
4. All cases reported to public authorities as required.	4
B. Administration and Supervision	40
1. All executives participated in accident prevention program	10
2. Routine established to fix supervisory and employee responsibility	10
3. Safe methods of manufacturing or operating procedure continuously enforced, and penalties applied when necessary	10
4. Safety practice motivated through supervisors' and employees' committees, meetings, and rallies	10
C. Medical Examinations and Treatment	40
1. All employees exposed to special occupational hazards given a periodic medical examination.	20
2. All employees who had occupational disease, poisoning or accident, brought immediately to professional attention for first aid treatment.	20
D. Inspection and protection	40
1. Regular periodic inspections of factories and shops, made according to approved standards of sanitary practice, to protect employees against occupational diseases, poisonings and accidents	20
2. All necessary mechanical devices or guards in use for the environmental and personal protection of workers against injury	20
E. Education	40
1. All employees had instruction on accident prevention through bulletin boards, posters, talks and moving pictures	20
2. All employees exposed to particular occupational diseases, accidents or poisonings had special instruction on the causes and methods of prevention of same	10
3. All employees had group instruction and practice on first aid and safety through special classes or contests	10
F. Laws and Regulations	10
1. All public laws and company safety rules and regulations complied with	10
Maximum Total Score	200

appraisal plan for measuring the industrial safety program are:

1. It outlines a complete program of essential industrial safety activities and through a scoring method makes it possible to bring out the strong and weak spots in any particular program.

2. It presents a chart to guide a company's activities in the safety field and makes possible a rating or scoring against ideal assigned values of the various items.

3. It indicates how thoroughly these activities are being administered.

4. It supplies standard units of measurement by which progress of the

safety program from year to year may be followed.

5. It is an additional check on the end results of safety work. If the end results, such as the number of accidents, are not what they should be, this plan may indicate whether the program or the responsible individual is at fault.

6. It should stimulate a keener interest in the safety program through the entire personnel of a company.

7. It serves to integrate the safety program with the whole industrial health program, and the latter with the complete personnel and industrial relations service of a company.

Suggestion Systems in 1932 and 1933

By PAUL L. STANCHFIELD AND Z. C. DICKINSON, *University of Michigan*

The progressive decline in the number of suggestions submitted by employees during the depression years sets one to wondering about its cause. Is it a symptom of lowered morale? Have employees come to consider the rewards inadequate? Has management been neglecting to stimulate the passage of ideas up and down the line?

Annual data on suggestion system operations during 1932 and 1933 are tabulated for 22 establishments of 19 companies, including six which were unable to furnish data in the last study made (1931). Suspension of three systems since 1931 leaves in operation 20 out of the original 29. A decline in the number of suggestions submitted, per thousand employees, is reported in most cases for the period from 1930 through 1933. Partial figures suggest a reversal of this trend in the early months of 1934. Percentage of suggestions adopted has shown no general upward or downward movement. Amount of average award shows a distinct decline from 1930 through 1932, but no general shift is evident in 1933.

THIS article brings up to date a comparative record of the operations of the suggestion systems of certain companies which contributed materials to earlier studies. An article in this Journal compared the workings of such schemes in 26 companies for one year (usually 1925) or for the average of several years.¹ Similar data for most of the years 1926-1930, inclusive, were provided by nineteen of these companies and three others, and presented in another paper.² A third article compared the record of fifteen firms in 1931 with

their records for 1926-1930, and reported on the status of the suggestion systems of several other companies which were unable to furnish detailed statistics at that time.³ Now we present information and inferences concerning the results obtained by nineteen of the above-mentioned companies during the years 1932 and 1933.

In the third article it was possible to give particulars for the year 1931 for only 14 of the 29 companies which had supplied data for one or both of the original reports. The real mortality of suggestion schemes, however, was much lower than this comparison suggests, since some companies indicated that their systems were still in

¹ Z. C. Dickinson, Suggestion Systems Compared. *Personnel Journal*, 1928, 7: 12-17.

² Z. C. Dickinson, Suggestions from Workers: Schemes and Problems. *Quarterly Journal of Economics*, 1932, 46: 617-643.

³ Z. C. Dickinson, Suggestion System Operations, 1926-1931. *Personnel Journal*, 1933, 12: 16-22.

operation, though statistics were not available for all years. Twenty-four of the original 29 systems were still operating in 1931. Of the others, only two were known to have been definitely discontinued, while two others had "suspended" operations, and one had not responded to inquiries since 1926. Despite the financial stringency of 1930-31, only one discontinuance could be definitely attributed to the depression.

Inquiries for information on suggestion system operations were sent, during 1934, to the 29 firms, and all but two responded. Only one company (No. 28) reported that its suggestion system had been suspended since 1931, but in some other cases operations were on a restricted basis. Two firms (numbered 15 and 29 in previous reports) indicated that their systems were still theoretically in operation, but had become so nearly dormant that they were unable to furnish comparative data on the same basis as in earlier years. Of these three virtual suspensions, it should be noted that two (Nos. 15 and 28) were of British firms. Nineteen companies (including six which had not reported on their 1931 experience) furnished data for the years 1932 and 1933, which are given in table 1.

The tables given for 1932 and 1933 have been simplified by the omission of Columns 8-13 of the earlier reports. Reports given spontaneously by some of the firms show no significant differences in the items eliminated, which were the range of awards, recidivism, and the relative importance of women's suggestions; no reason is apparent why they should have changed.

Employee representation, on the other hand (Column 13 of earlier tables) has obviously taken a new turn since 1932, which may in time have significant effects upon suggestion schemes.

In consideration of the probable importance of employment levels in modifying the results received from suggestion systems, an attempt was made to obtain information upon both the average number of employees on the payroll and on the total man hours worked in each firm in 1929, in 1932, and in 1933. (See Columns 4-a and 4-b; 1929 = 100).

Although the number of concerns is rather small and the statistics furnished are not completely comparable, these data indicate certain general trends, from year to year, in the number of suggestions received per thousand employees. Table 1 presents, in addition to the figures for 1932 and 1933, an earlier record for each firm to serve as a "bench-mark" or norm for purposes of comparison. In most cases this base figure refers to a group of years (preferably 1926-29), but for some firms the record for a single (specified) year had to be used. To aid in understanding the changes between 1929 and 1933, it is useful to summarize the changes which occurred during 1930 and 1931, which are not presented in detail in the Table. During 1930, the number of suggestions per thousand workers showed a marked upward trend in most of the firms reporting. When the record of each individual plant for 1930 is compared with the average record of the same establishment for the series of years before 1930 (or, when such series are lacking, with the latest

TABLE 1

ESTAB. NO.	INDUSTRY, LOCATION	SIZE ¹	PERIOD	AVG. NO. EMPLOYEES AS PER CENT OF NO. IN 1929	TOTAL MAN HOURS WORKED IN YEAR AS PER CENT OF FIGURE FOR 1929	NO. SUGGESTIONS PER 1000 EMPLOY- EES	PER CENT AWARDED ²	AVERAGE PAYMENT PER AWARDED SUGGESTION ³
(1)	(2)	(3)	(4)	(4-a)	(4-b)	(5)	(6)	(7)
1	Rubber mfg., mid-west	Large	1926-29			273	14	\$15.18
			1932			188	22.5	8.60
			1933			163	23	13.85
2	Rubber mfg., mid-west	Large	1926-29			170	24	10.61
			1932	57		200	24	10.00
			1933	61		181	32	9.26
3	Rubber mfg., mid-west	Medium	1930			100	10	12.30
			1932	95	83	12 ⁵	75 ⁵	9
			1933	103	94	8 ⁵	75 ⁵	8
4-a	Electrical mfg. east ⁶	Large	1930			187	25	6.85
			1932	39 ⁴	25	201	34	6.72
			1933	35 ⁴	23	196	36	7.23
4-b	Electrical mfg. east ⁶	All plants	1928-29			101	27	6.00
			1932	36	28	148	32	6.56
			1933	39	33	117	30	7.27
5-a	Electrical mfg. east ⁶	Large	1926-29			294	33	15.81
			1932		29	133	35.3	9.15
			1933		29	145	29	9.20
5-b	Electrical mfg. east ⁶	Medium	1926-29			219	31	10.09
			1932		43	308	35	6.30
			1933		48	130	28	5.90
8	Paper mfg. east	Medium	1930 ⁷			533	28	4.28
			1932			138	19	5.60
			1933			50	16	5.41
9	Paper mfg. east	Medium	1926-29			593	30	7.87
			1932			377	26	10.88
			1933			508	20	9.69
12	Brass mfg. east	Medium	1926-31			67	34	7.40
			1932	70	51	100	33	5.42
			1933	88	71	40	45	5.05
13	Food mfg. British	Large	1927-29			120	31	3.75
			1932	85	91	215	34	3.79
			1933	86	94	175	29	2.96
14	Food mfg. British	Large	1927-29			559	16	3.12
			1932	97	99	410	20	4.00
			1933	97	100	416	20	3.77
18-a	Chemical, east	Medium	1927-29			540	23	11.00
			1932			493	25	10.83
			1933			420	25	10.24
18-b	Chemical, east	Large	1927-29			219	38	6.39
			1932			211	33	4.61
			1933			252	34	4.65

TABLE 1—*Concluded*

ESTAB. NO.	INDUSTRY, LOCATION	SIZE ¹	PERIOD	AVG. NO. EMPLOYEES AS PER CENT OF NO. IN 1929	TOTAL MAN HOURS WORKED IN YEAR, AS PER CENT OF FIGURE FOR 1929	NO. SUGGESTIONS PER 1000 EMPLOY- EES	PER CENT AWARDED ²	AVERAGE PAYMENT PER AWARDED SUGGESTION ³
(1)	(2)	(3)	(4)	(4-a)	(4-b)	(5)	(6)	(7)
19	Public utility, midwest	Medium	1926-29			306	27	7.50
			1932	78		185	7	6.00
			1933	82		275	7	7.25
20	Public utility, midwest	Large	1926-29			178	17	8.95
			1932	74		144	13	26.25
			1933	71		146	16	19.30
21	Public utility, east	Large	1926-30			331	17	8.25
			1932			149	22	7.14
			1933			153	27	4.81
23	Department store, east	Large	1925			114	17	3.72
			1932	107		34	8	3.00
			1933	92		90	8	6.75
24	Department store, east	Medium	1930			150 ⁵	10 ⁵	2.00 ⁵
			1932 ⁸					
			1933	100		42	16	1.20
25	Department store, east	Large	1927-29			70	17	4.50
			1932	119		60	20	3.46
			1933	121		75	16	3.52
26	Life Insurance, east	Large	1929			20	34	9.00
			1932			15	50	7.71
			1933			16	42	7.31
27	Machinery mfg., British	Small	1926-29			2,884	40	3.50
			1932	83	78	6,460	35	1.98
			1933	93	91	5,850	32.4	2.00

¹ "Large" = 5,000 or more employees; "medium" = 1,000 to 5,000; "small" = under 1,000.

² Or, "accepted," i.e., given some sort of cash or honorary award. In some cases a suggestion receives an award without being actually put into operation.

³ Total payments in year (including regular, special, and supplementary prizes) divided by number of suggestions awarded during the year.

⁴ This index is here calculated with 1930 used as a base instead of 1929, which is the base in all other cases. In earlier reports, a link-relative, giving number on payroll as a per cent of number in the preceding year, was used.

⁵ Estimated.

⁶ 4-a is a single plant, while 4-b covers all plants of the same company. 5-a and 5-b are two plants of a single corporation, likewise 18-a and 18-b.

⁷ 1930 is used as base-year for this firm because a lower standard of acceptance, operative up to the middle of 1929, makes earlier figures uncomparable.

⁸ In operation during 1932, but no records kept.

⁹ Indefinite. Wage increases and promotions.

single year reported prior to 1930), the number of suggestions per thousand employees is significantly larger in 16 cases, smaller in 5 cases, and shows no significant change in two cases.⁴ (There was no indication of a decline in quality, since both the percentage of acceptance and the real value of the average award were maintained in most cases.)

This tendency was reversed in the following year; the quantity index for 1931 was lower than that for 1930 in 11 cases, unchanged in one case, and higher in only 5 cases. Only seven plants, however, reported a volume of suggestions in 1931 which was significantly lower than in the base period. This decline continued through 1932, and also through 1933 at a diminished rate. The number of suggestions per thousand workers in 1932 was lower than in 1931⁵ in 14 cases, unchanged in one case, and higher in four. Other firms, moreover, which had suggestion systems in operation in 1931 and 1932, but could not furnish detailed statistics, reported a marked decline in the number of suggestions received. In 1933 the downward trend was more moderate: nine plants received fewer suggestions

than in 1932, the index was unchanged in four cases, and higher in six cases. By 1933, the quantity index was significantly below that for the base period in 12 cases, unchanged in 3 cases, and higher in 5. Six of the decreases were of more than 40 per cent of the original figure, while only two of the increases (both British firms) were over 20 per cent. Several informants have remarked that suggestion results for 1934 are running distinctly higher again. Company No. 19, for example, reports that it received more suggestions for the first four months of 1934 than during the entire year in 1932.

An increase in the number of suggestions *per worker still on the payroll* might be expected, a priori, during periods of declining employment, since the general quality of the working force is apt to be increased by lay-off of the less competent employees, and those retained have an increased incentive to work up suggestions (either to attract favorable attention, or to augment declining wages). This expectation seems to be borne out by the figures for 1930. The increased economic difficulties of 1931-33, however, apparently introduced new factors, resulting in the reduced volume per employed person described above. One of these influences may have been, as some correspondents have suggested, that the average worker became so concerned with the possibility of losing his job that he devoted his whole attention to his assigned task, neglecting "non-essentials." The reduced volume of business may have reduced the opportunities for worth while suggestions, even if the worker were

⁴ In this discussion changes of less than five per cent in the number of suggestions per thousand employees will be reported as "unchanged." Where two plants or branches of a single firm have contributed separate data (e.g., 5-a and 5-b, or 18-a and 18-b) they are considered as separate cases, since such plants often show variations dissimilar to those of their fellows under common ownership.

⁵ In three cases (Nos. 3, 24, and 26) the comparison is with the record for 1930, since no figures are available for 1931.

as alert as ever; and the nucleus of workers left on the payrolls may have been handicapped as suggesters by such factors as age or clerical or supervisory position. Many firms, moreover, probably devoted less resources to stimulating and publicizing their suggestion activities.

The decline in quantity of suggestions cannot, it appears, be attributed in any large measure to policies of diminished payment or to a general lowering of the percentage of acceptances. The ratio of awarded suggestions to total suggestions showed no

gestions received (from base period to 1933) reported substantial *increases* in the acceptance ratio—increases of from 7 to 13 percentage points (Nos. 1, 12, 21, and 24). It may be that in these cases the causes which led to a decline in the number of suggestions *submitted* tended to weed out a large proportion of the poorer ideas, but did not restrict the reception of the more valuable suggestions.

A summary of the changes in the amount of the average award given for accepted suggestions is presented in table 2. This table shows the

TABLE 2
Amount of average award

Number of U. S. plants giving, in each year, an average award for accepted suggestions amounting to indicated percentage of same plant's award in base period—usually 1926-29

YEAR	LESS THAN 80	80 TO 95	95 TO 105	105 TO 120	MORE THAN 120	
1930	1	4	3	2	5	(N = 15)
1931	3	5	1	2	2	(N = 13)
1932	7	3	2	1	3	(N = 16)
1933	6	4	1	1	4	(N = 16)

distinct upward or downward tendency between the base period and 1933. In five out of 20 cases this "acceptance ratio" had not changed by more than 3 percentage points; in eight cases the ratio was significantly higher, but the change was more than ten per cent in only three cases; and declines of more than three per cent occurred in seven cases, but only three of these were over 10 per cent. That changes in acceptance ratio have no direct causal effect upon the number of suggestions received, is suggested by the fact that four of the seven firms reporting the greatest declines in number of sug-

relationship between the average awards given by American plants in each of the years 1930-33, and the award given by the same plants in their base period. A clear tendency is evident, especially in 1932 and 1933, for the average award to be lower than in the base period; but in most cases the decline was probably not great enough to reduce the ratio of the award to the employee's wage or his cost of living. Reduced awards may reflect, in part, a decline in the "technical" value of suggestions to the employing firm—since, during a time of business recession, each unit saving

is repeated in small-quantity instead of large-quantity production.

The percentage of survivals among the systems which have been studied may well be higher than in industry at large, since the specific concerns included (utilities, stores, food industry, and large manufacturing concerns) may have been more sheltered from the economic pressure of the past few years than industries in general. It appears, however, that suggestion systems which once become solidly established are likely to survive even when retrenchments are in order; of the nine schemes which have been

discontinued or suspended since 1925, seven had never shown markedly successful activity.

The suspension of suggestion operations by two of our five British concerns probably does not indicate a similar decline in British suggestion systems, since each of the two concerns was somewhat exceptional. The rather outstanding success of the other three British concerns might even suggest that in England, where the depression was no novelty in 1929, suggestion operations have gone on much as usual since that year.

Interests and Sales Ability

BY EDWARD K. STRONG, JR., *Stanford University*¹

In 1927 Dr. Strong found partial evidence for the conclusions which he makes in this article. But he did not publish this; more research was necessary. Now, after seven years, he demonstrates the usefulness of his Vocational Interest Test in selecting life insurance salesmen. Two-thirds of the salesmen who get an A interest rating are successful in their occupation, whereas only 6 per cent of those who grade C on the test are successful.

A STEADILY increasing number of life insurance managers are using the Vocational Interest Test as an aid in the selection of insurance agents. Some of these managers go so far as to say that scores on this test are more significant than their own judgment, and they have very interesting stories to tell in support of their claim. What are the facts?

Scores for life insurance interest indicate how nearly the likes and dislikes of an applicant coincide with the likes and dislikes of the average insurance agent of at least three years experience, writing at least \$100,000 paid-for business annually.² The

assumption is that if the applicant has the interests of men who are successful in the business he will similarly fit into that same working environment. Is the assumption a sound one? Is there a genuine relation between interest and ability?

PRELIMINARY INVESTIGATIONS

In 1927, 67 life insurance agents filled out the Cowdery Interest Test and supplied the writer with their paid-for production for the three years

¹ Read in part at the meeting of the Western Psychological Association on June 22, 1934.

² The scores range from -430 to 600. It is usual to express the scores in terms of ratings. A rating of A (scores of 223 to 600) means the applicant has the interests of a successful insurance agent; a rating of C (scores of 10 to -430) means he does not have such interests; ratings of B+ (143 to 222), B (55 to 142) and B- (11 to 54) are intermediate, meaning he probably has those interests but one can not be so sure of it as in the case of A rating.

It is quite possible for one to check the

Vocational Interest Test deliberately so as to receive a high rating in a particular occupation. Consequently, the subject should be made to realize how advantageous it is to him to find out what his occupational interests really are. When he approaches the test with this attitude he is not apt to falsify his responses. Proper motivation is needed less in the case of applicants for the life insurance business than in almost any other occupation because many have to be induced by the general agent to consider this occupation. Consequently, if there is error in checking the blank because of improper motivation, it is as likely to result in too low as too high a life insurance interest rating.

1924-26. Nearly all these men lived in San Francisco and represented at least a dozen different insurance companies. A follow-up a year later showed that 44 were still with the same agency, 9 had transferred to another agency and 14 had left the insurance business. Because of a subsequent radical revision of the interest test these data can not be incorporated with the remainder and are reported separately.

Table 1 gives the average annual production of the 67 insurance agents.

the turnover is greatest with the C and B— men and least with the A men.

If only men with B ratings or better had been given a contract, 19 of the 67 would not have been employed. This would not have been a particular loss for only one of the 19 wrote as much as \$100,000 and the entire group averaged only \$56,000. Moreover, 12 of the 19 left the agency in 1927, so that only 7 remained and they were all poor producers. On the other hand, of the 48 who would have been employed, 5 wrote less than \$100,000 and 32 more

TABLE 1

Average paid-for production, 1924-26, of 67 life insurance agents according to interest test ratings (Cowdery blank)

	LIFE INSURANCE INTEREST RATINGS					
	C	B—	B	B+	A	Total
67 agents: number.....	3	16	14	18	16	67
67 agents: average annual production.	58,000	55,000	126,000	167,000	289,000	156,000
44 agents remaining with agency:						
number.....	0	7	8	13	16	44
44 agents remaining with agency:						
production.....	0	57,000	158,000	200,000	289,000	202,000

The three agents who rated C in 1927 averaged only \$58,000 production, and all of them left the business the following year. Sixteen others rated B— with an average production of \$55,000. Four of these transferred to another agency and 5 left the business. On the other hand the 16 men rated A all remained with the agency the subsequent year. The table shows a very definite relationship between interest rating and production. The A men wrote over five times as much as the C or B— men, over twice as much as the B men and nearly twice as much as the B+ men. Moreover,

than that amount, while 11 left the agency, five going to another agency and 6 leaving the business. Selection at the level of B rating eliminates almost no successes but includes some failures. Selection at the A rating level eliminates all failures in this particular group but also some successful men.

The data in table 1 show such surprising correlation between life insurance interest scores and production that at the time the writer did not feel warranted in publishing them until they could be substantiated by further evidence. The next section records

the data that have been subsequently accumulated.

SOURCES OF THE DATA

The data reported below have been obtained from four different sources which are referred to by the letters W, X, Y, and Z.

W. In 1927 a medium sized life insurance company supplied the writer with a list of all its agents who had had at least 36 months experience and had written at least \$100,000 paid-for insurance in 1926. In 1931 the paid-for production of these men for the years 1926 to 1930 inclusive was supplied. One hundred and two men continued with the company at least two of these five years and the data given below are based upon them. They have had an average of 8.9 years of experience and have averaged annually \$225,648 of paid-for production during the years 1926 to 1930 inclusive.³ All of these men filled out the Vocational Interest Test in 1927.

X. During the last five years the

³ The correlation between production and years of experience is .17 with this group of insurance agents. It is frequently urged that occupational interest scores must be influenced greatly by experience in the occupation. It is significant in this connection that the correlation between life insurance interest score and years of experience in the case of these 102 agents is -.06. Of course, all these men have had at least 3 years experience when they took the test and most had had many more years than that, so that this correlation is based on men of seasoned experience. But a correlation of approximately zero indicates that men with ten to twenty years' experience do not score higher than men with three to five years' experience. This is only another proof of the remarkable constancy of interests among adult men.

manager of a relatively small city agency has required applicants to fill out the interest test, and these blanks together with a complete record of production from date of contract to December 30, 1933 have been supplied the writer. Where men were not employed or the contract was terminated, explanations have been supplied. All told, 46 men were considered to the extent of being asked to fill out the interest test, but only 20 were given a contract; and only 16 of these continued with the agency more than 3½ months. These 16 agents average 39 years of age today and 43 months of experience.

Y. In 1929 a state branch of a large life insurance company supplied paid-for production from January 1, 1926 to September 20, 1929 of all its agents, and interest test scores for nearly all these agents. Two years later the production for 1929 and 1930 was supplied. During the year 1930 the agency discontinued all part-time contracts, thereby decreasing the size of the agency very considerably. From all these records it has been possible to use only 39 cases for this study. These were all full-time men in 1930, with at least 3 years experience and averaging 8.6 years; but much of this was on a part-time basis. The remainder had had too little experience for their production record to be accepted as significant, or they had not filled out the interest test. The 39 men average 47 years of age.

Z. During 1929-30 the writer wrote to many agency managers requesting that they arrange to have at least one of their former agents fill out an interest blank, so that we might deter-

mine the range of life insurance interest scores of men who have tried the business and quit because of failure, lack of interest or for any other cause. The returns were very disappointing. Apparently agency managers keep no record of former employees because the majority of agents who coöperated sent in blanks of men still with the agency who were rated as "failures," "unhappy in the business," "not doing as well as they should," etc. A few blanks were received of former agents and in about half of these cases a full report was made as to length of time employed, production, and type of employment entered. From all the miscellaneous data received it has been possible to use the records of 19 men who have tried the life insurance business and clearly were unable to write sufficient business to earn a living. This group is on the average 37 years old with one year of college education and has had 2.6 years' experience writing \$41,000 of paid-for business annually. Eight additional cases have been included in some of our calculations. These are men reported as "unhappy," "not doing as well as they should," etc. They have had 5.0 years' experience and have averaged \$126,000 paid-for business.

RESULTS

If the life insurance interest is a significant aid in selecting applicants for the business, the following propositions should be true:

1. Successful life insurance agents score higher on the life insurance interest test than men in general.

2. Successful life insurance agents score higher than unsuccessful agents.
3. Men with low life insurance interest ratings do not earn a living in the business.
4. Men with low scores do not stay in the business whereas men with high interest scores continue in the business, even though some leave one agency for another.
5. There is a significant correlation between life insurance interest scores and production.

Table 2 indicates very clearly that the majority of successful life insurance agents rate A or B+ in life insurance interest. This is not only true of the criterion group of 288 insurance agents, upon which the test was standardized, but is true of 204 general agents and of the seasoned agents in Company W. Agency X does not contain as high a percentage of A men as Company W, having proportionately more B+, B and C men. But this agency group has had far less experience (only 35 months on the average) in comparison with an average of 8.9 years' experience for Company W. Agency Y contains still fewer A and B+ men and more C men but its production averages only \$106,000, only half that of Company W. The situation is largely reversed in Group Z, particularly among those rated as "failures," for here only 28 per cent rate A and B+ in contrast to 92 per cent in Company W and 42 per cent rate B- and C in contrast to 4 per cent in Company W. The data from Stanford seniors gives some idea of the proportion of high and low life insurance interest ratings to be found

among college graduates, and indicates that successful life insurance men are far from being a random sampling of educated men as far as life insurance interest is concerned. Evidently successful life insurance agents score higher in life insurance interest not

scores of 222 college men tested five years after graduation. Ninety-two per cent of the successful agents rate A and B+ in contrast to only seven per cent of college graduates. Evidently the selection of successful agents (rating A and B+) is quite an art, for

TABLE 2
Life insurance interest ratings of certain groups of life insurance men

GROUP	NUMBER	YEARS OF EXPERIENCE	AVERAGE ANNUAL PAID-FOR PRODUCTION	LIFE INSURANCE INTEREST RATINGS				
				Per cent C	Per cent B-	Per cent B	Per cent B+	Per cent A
Criterion group of agents.	288	At least 3 years	\$100,000 up	1	2	6	16	75
L. I. general agents*	204			3	1	8	15	73
Company W	108	At least 3 years	225,648†	2	2	4	15	77
Company W	102	At least 4 years	207,980‡	2	2	4	15	77
Agency X, all given a contract . .	20	Complete record	205,000	10	0	15	35	40
Agency X, all writing \$100,000 a year for at least a year	15	Complete record	258,000	7	0	13	40	40
Agency Y	37	At least 3 years	106,000§	11	5	19	33	32
Group Z, rated as "failures," "unhappy," "not doing as well as they should," etc	73	3.5 years	66,000	32	5	23	18	22
Group Z, rated as "failures" (included in above)	46	2.6 years	41,000	35	7	30	17	11
1927 Stanford seniors, 5 years after graduation	222			73	8	12	4	3

* The correlation between scores on the life insurance agent interest scale and a scale based on the interests of these 204 managers is .91.
† Average production based on 1926 only.
‡ Average production based on two or more years, 1926 to 1930 inclusive.
§ Based on 1926 to 1930 inclusive. In 1930 all the 37 agents were on full-time contract, but prior to 1930 about one-half had been on part-time production.

only than men in general but also than unsuccessful agents.
In order to emphasize the point that successful life insurance men score significantly higher in life insurance interest than the average man, the interest scores of 102 successful insurance agents from Company W are plotted in Figure 1 together with the

the general agent must consider 1429 college graduates in order to discover 100 men of this calibre.
Between these two graphs is interposed another representing 181 men, composed of the 102 described above, 15 from Agency X, 37 from Agency Y and 27 from Group Z. These 181 men are more typical of the men found in

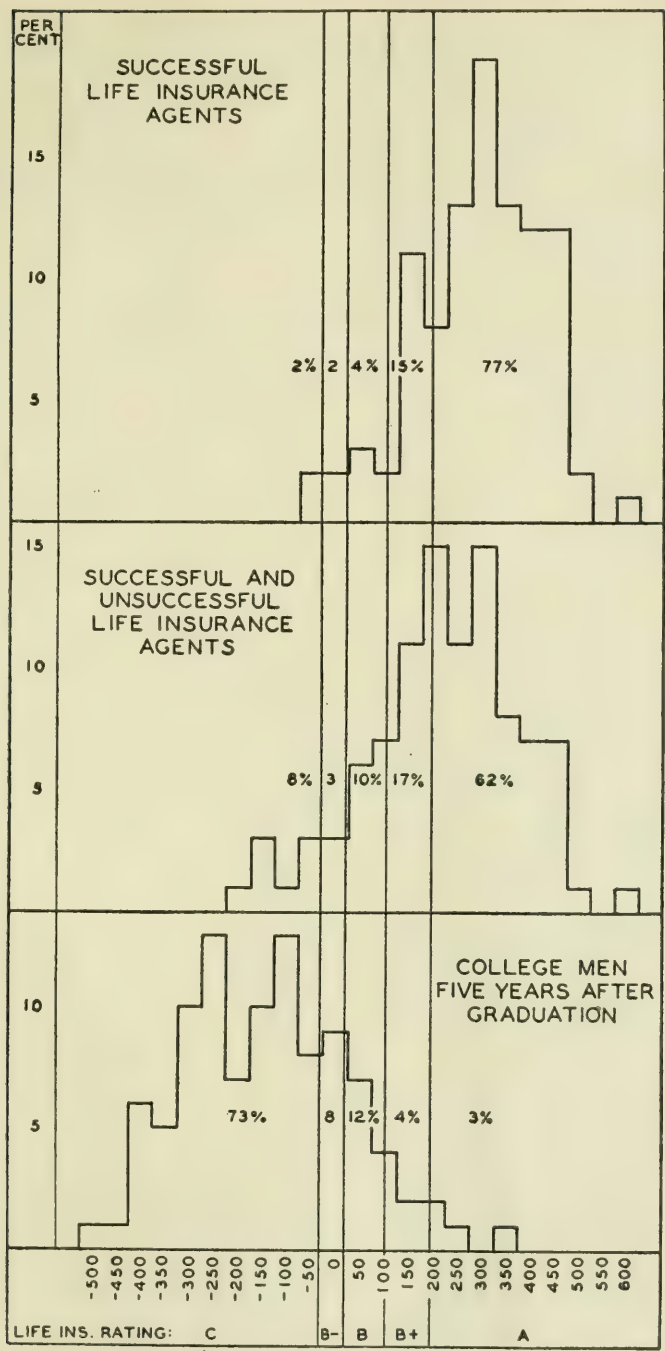


FIG. 1. DISTRIBUTION OF LIFE INSURANCE INTEREST SCORES FOR (a) 102 SUCCESSFUL LIFE INSURANCE AGENTS, (b) 181 SUCCESSFUL AND UNSUCCESSFUL AGENTS AND (c) 222 COLLEGE GRADUATES, FIVE YEARS AFTER GRADUATION

many agencies ranging from the successful to those about to quit and including some who are not earning a living but are still hanging on. Here are fewer men rating A and B+ and more rating B- and C. From the three graphs we can see that practically no man scoring below -100 will be successful and that no man scoring below -250 will be found in an insurance agency. But 66 per cent of college graduates score below -100 and 36 per cent below -250. Evidently successful life insurance agents score higher in life insurance interest than men in general. And the data in table 2 show that they average much higher than failures.

Another way of showing that the interests of life insurance agents are distinct from the interests of men in many other occupations is presented in table 3. Evidently the interests of the former are related to those of real estate salesman (correlation of .85) and to a lesser degree of vacuum cleaner salesman (correlation of .59) and advertising man (correlation of .43). But the correlation is low or negative with the remaining twenty-five occupations listed in the table. The data recently reported by Achilles and Schultz⁴ indicate that the interests of life insurance agents from the Metropolitan Life Insurance Company are most closely related to the interests of the following: vacuum cleaner salesman, office worker, life insurance salesman, personnel manager, accountant, Y. M. C. A. general secretary, real estate salesman, etc. This appar-

ent discrepancy is due to the fact that the Metropolitan agents are engaged primarily in selling industrial policies.

TABLE 3

Correlation between interests of life insurance agents and interests of men in 28 other occupations

OCCUPATION	CORRELATION
Real estate salesman.....	.85
Vacuum cleaner salesman.....	.59
Advertising man.....	.43
Y.M.C.A. general secretary.....	.38
Office man.....	.32
Lawyer.....	.31
Personnel manager.....	.26
City school superintendent.....	.22
Purchasing agent.....	.22
Y.M.C.A. physical director.....	.18
Journalist.....	.15
Accountant.....	.08
Certified public accountant.....	.07
Minister.....	.04
Policeman.....	-.18
Teacher.....	-.23
Musician.....	-.35
Artist.....	-.44
Farmer.....	-.47
Carpenter.....	-.48
Dentist.....	-.58
Physician.....	-.61
Architect.....	-.66
Engineer.....	-.72
Mathematician.....	-.78
Psychologist.....	-.79
Physicist.....	-.86
Chemist.....	-.88

Table 4 indicates that men with low life insurance interest ratings do not write enough insurance to earn a living (only \$72,000 per year) and that there is a decided increase in average production with higher and higher ratings. Men with B+ ratings earn twice as much as those with C ratings and men with A ratings earn nearly three times as much. On this basis an

⁴ P. S. Achilles and R. S. Schultz, Characteristics of Life Insurance Salesmen, *Personnel Journal*, 1934, 12: 260-263.

agency with 100 men rated A would write \$191,000,000 whereas an agency with 100 men rated C would write \$72,000,000. But relatively few of the C men would continue in the business a whole year and to maintain one hundred C men it would be necessary to hire at least two hundred during

qualify, 51 per cent of B+ men, 44 per cent of B men, and only 25 per cent of C men. The A man is 3.4 times more likely to succeed than the C man. If we assume that an income of about \$2000 is necessary, which is about what is earned in writing \$150,000 of business, then 67 per cent

TABLE 4

Average annual paid-for production in relation to life insurance interest ratings

GROUP	TOTAL NUM- BER	LIFE INSURANCE INTEREST RATINGS				
		C	B-	B	B+	A
Company W. At least 4 years' experience:						
Number.....	102	2	2	4	15	79
Production.....		\$169,000	\$236,000	\$270,000*	\$186,000	\$209,000
Agency X. At least 4 months' experience:						
Number.....	15	1	0	2	6	6
Production†.....		\$2,000		\$135,000	\$195,000	\$222,000
Agency Y. Total record of 5 years:						
Number.....	37	4	2	7	12	12
Production.....		\$68,000	\$82,000	\$101,000	\$103,000	\$134,000
Group Z. Rated "failures:"						
Number.....	27	9	1	4	5	8
Production.....		\$60,000	\$45,000	\$51,000	\$67,000	\$82,000
Total:						
Number.....	181	16	5	17	38	105
Production.....		\$72,000	\$136,000	\$133,000	\$145,000	\$191,000

* Influenced greatly by one case with average production of \$674,000. Average of other three cases is \$102,000.

† Production was reported in terms of actual earnings, not paid-for production. The former has been converted into the latter on basis of \$13.50 for each \$1,000 policy.

the year, and probably more than that number.

Table 5 tells the same story but in a different way. Only 6 per cent rated C wrote over \$150,000 a year whereas 43 per cent of B+ men and 67 per cent of A men wrote \$150,000 or more. If we assume that a production of \$100,000 is the minimum for earning a living, then 85 per cent of A men

of A men are successful in contrast to 6 per cent of C men!

Another measure of success is the length of time men continue in the business; men with A ratings should continue much longer than men with B- or C ratings. Our data are not adequate to demonstrate this. The records from Company W are based on those who have been in the business

36 months and wrote at least \$100,000 in 1926. Very few left the insurance business in the ensuing four years. The records from Agency Y are complete for only the men who had full-time contracts in 1930. Many part-time men had left prior to this time but their records are too incomplete to permit conclusions. Even in the case of Agency X, where quite complete records are available, the numbers involved are too small and the factors involved too complex to war-

production of \$100,000 a year. It is possible that, if a similar scale were based on men averaging \$200,000 a year, it would differentiate still better between successful and unsuccessful agents. Such a provisional scale has been developed using the records of only 97 men. The interest blanks of 209 agents have been scored on this scale. Those with production between one and two hundred thousand have a median score of 257 which differs significantly from the median score of

TABLE 5

Percentage of 181 agents in each life insurance interest rating who produce \$0 to \$49,000, \$50,000 to \$99,000 etc., annually

AVERAGE ANNUAL PRODUCTION	NUMBER	PER CENT OF AGENTS IN EACH LIFE INSURANCE INTEREST RATING WHO PRODUCED INDICATED AMOUNT OF PAID-FOR INSURANCE				
		C	B-	B	B+	A
\$0 to \$49,000	19	31	20	17	21	2
50,000 to 99,000	39	44	20	39	28	13
100,000 to 149,000	30	19	20	23	8	18
150,000 to 199,000	38	6	20	16	16	26
200,000 to 399,000	49	0	20	0	24	37
400,000 up	6	0	0	5	3	4
Total		100	100	100	100	100
Number	181	16	5	17	38	105

rant any conclusions.⁵ Nevertheless the writer is certain that anyone studying the data he has before him would agree that a much larger proportion of men with low interest ratings drop out of the business than men with high ratings.

Measurement of life insurance interest in this study has been based upon the interests of agents with three years' experience and an average

406 obtained by those averaging over \$300,000 production. A scale based on only 97 men is not sufficiently reliable, however, to warrant the obvious conclusion suggested by table 6. Unfortunately we do not possess today the necessary records to establish a scale based on 250 cases, which should be the minimum number. There is need for further research here, first, because such a scale might prove to be more significant than the present one and second, because comparison between the two scales and production records might throw additional light

⁵ Eight A men have so far averaged 40 months in Agency B; seven B+ men, 39 months; 3 B men, 29 months, 2 C men, 11 months.

TABLE 6

Interest ratings of insurance agents on a provisional scale based on agents writing at least \$200,000 annually

PRODUCTION	NUMBER	PER CENT RATING					MEDIAN SCORE*
		A	B+	B	B-	C	
\$100,000 to \$199,999	112	67	21	10	2	0	257
200,000 to 299,999	40	81	12	5	2	0	300
300,000 and up	57	86	12	2	0	0	406
Total	209	75	17	7	1	0	303

* Difference in median scores of 406 and 257 is 7.6 times the quartile of the difference; difference between 406 and 300 is 3.5 times the quartile of the difference; difference between 300 and 257 is 1.5 times the quartile of the difference.

TABLE 7

Correlation between life insurance interest scores and production

GROUP	NUMBER	MONTHS OF EXPERIENCE	RANGE OF PRODUCTION (UNIT IS 100,000)	RANGE OF INTEREST SCORES	PER CENT PRODUCTION UNDER \$100,000	PER CENT WITH C AND B- RATINGS	CORRELATION COEFFICIENT
1. Company W.....	102	At least 48	37 to 650	-25 to 600	14	2	.10*
2. Agency X.....	20	1 to 87	0 to 379	-12 to 369	25	10	.20†
3. Agency X.....	16	4 to 87	1 to 379	-12 to 369	19	12	.48‡
4. Agency X and subsequent agency record..	26	1 to 89	0 to 379	-12 to 369	44	8	.33§
5. Agency X and subsequent agency record..	22	4 to 89	1 to 379	-12 to 369	45	9	.55**
6. Agency Y.....	37	At least 36	26 to 271	-187 to 348	57	16	.52
7. Group Z, rated "failures," "unhappy," etc.....	27	3 to 120	0 to 200	-169 to 407	74	37	.23
8. Group Z, rated "failures," only.....	19	3 to 96	0 to 85	-169 to 407	100	42	.02
Total of 1, 3, 6, and 8...	181	3 up	0 to 650	-169 to 600	43	17	.37††

* The reliability of the production criterion, based on the average of 2 to 5 years, may be judged from the following correlations: 1926 production vs. 1927, .78; 1927 production vs. 1928, .77; 1928 vs. 1929, .84; 1929 vs. 1930, .74; average of 1926 and 1927 vs. average of 1929 and 1930, .81.

† If one case is omitted, who with considerable aid from his manager sold a group policy and then resigned, the coefficient is .40.

‡ If above case is omitted, the coefficient is .79.

§ If above case is omitted, the coefficient is .50.

** If above case is omitted, the coefficient is .77.

†† Above exceptional case is omitted.

on the relationship between interest and ability.

In studies of this sort it is customary to ascertain the relation between success and the test score by correlating the two measures. Such correlation coefficients are presented in table 7. After noting the very distinct relation between interest ratings and production in the foregoing tables it is quite a shock to find that these measures correlate only .37 in the case of the 181 cases comprising most of our data. Is there any explanation? Careful analysis of the scatter diagrams makes clear that each distribution is foreshortened at one end or both and this applies not only to interest test scores but also in some cases to production figures. Such a condition lowers the correlation unduly. Thus, the range of interest scores in the first group (Company W) is between -25 and 600 (with 91 per cent above 150) which is but 61 per cent of the entire range of -430 to 600.⁶ Those rated "failures" range between -169 and 407 in interest scores which is but 56 per cent of the possible range, and at the same time they range between \$0 and \$200,000 production which is but 31 per cent of the production range between \$0 and the highest reported in our data, i.e. \$650,000, and this amount is less than that of the best producers in the country. Were it possible to induce a random sampling of the population to do their best to make a success in the life insurance business, the relationship between their interest scores

and production would undoubtedly be considerably higher than a coefficient of .37.

A second explanation of the low correlation coefficients is to be found in the fact that in only one case do we have anything like a complete record of all the men who entered an agency and their subsequent accomplishments. The correlation between interest score and production in this case (Agency X) is .20 when based on records from only this agency and .33 when records from other agencies are added so as to cover the agent's entire insurance experience. These coefficients are raised to .48 and .55, respectively, if the records of those with less than 4 months experience are excluded on the ground that such records must be very unreliable.⁷ All four coefficients are raised to .40, .50, .79 and .77, respectively, if a single case is excluded which the manager emphatically claims should be disregarded. The manager states he did everything he could to help the man succeed but to no avail. The agent was finally assigned a group policy case and although he spent several months upon it was unable to put it over. The manager finally closed the case but rewarded the agent with such a substantial portion of the commission that it gave this man one of the highest production records in the agency. As his interest score was the lowest, this record very substantially

⁶ A general agent has recently reported a score of 799.

⁷ One new agent may sell \$10,000 to his family and quit after one month, giving him an annual production of \$120,000. Another man may sell \$5,000 monthly for seven months and quit, giving him a record of \$60,000; etc.

lowers the correlation when included in the calculations.

The third explanation of the low correlation coefficients is that they do not really measure what we want measured but something else.⁸ The low correlation coefficients indicate that there are some men with low interest scores that write a considerable amount of insurance and vice versa. But these coefficients do not at all tell the story that among successful agents (e.g. Company W) 92 per cent will be drawn from approximately 7 per cent of college men who rate A and B+ and that 4 per cent will be drawn from 81 per cent who rate C and B-. If 100 college graduates were hired at random, the chances would be very slight that any one of the 73 C men would succeed whereas the chances are good that the 3 A men would succeed, other things besides interest being disregarded. In other words from the practical point of view it is not at all necessary that a test foretell the order in which men will produce. What is very desirable in business today is that applicants who will succeed shall be employed and that those who will not shall not be hired. Anything that will aid the manager to increase his present efficiency even ten per cent is worthwhile. An outstanding agency supervisor, for

example, recently reported to the writer that according to his records only one successful agent was secured from forty contacts. Increasing the number of successful agents from one to two among forty is not a large increase in efficiency of selection yet it does represent an increase of one hundred per cent in production and a decrease of one half in expense of time and money of general agents.

The fourth explanation of the correlation of .37 between interest scores and life insurance production is that this is as high a relationship as may actually exist. Surely these are factors other than interest that determine success as an insurance salesman. These are discussed in the following section.

FACTORS WHICH DETERMINE SUCCESS IN SELLING LIFE INSURANCE

Success in selling insurance may be attributed to at least four general factors—age, interest, character, and economic status. From experience we know that young men seldom succeed in the life insurance business; clients want counsel concerning their private affairs from men of some maturity.⁹ From experience we also know that although older men may continue very successfully in the business if they entered it when younger, they seldom succeed if they enter late in life. A man may have the necessary interest, but if he is dishonest he will be discharged as soon as that fact

⁸ One can not help but wonder how often a low correlation between the scores of some test and production records has been accepted as proof that the test is useless, when it might have been possible to have set up two critical scores, those applicants scoring above the higher of which would prove to be quite likely to succeed and those scoring below the lower would prove to be quite likely to fail.

⁹ There appears to be, however, a growing conviction among general agents that, if young men of the right calibre are properly trained for the business, youth is not as great a handicap as previously considered.

is discovered. The same thing is true if he "does not fit into the agency;" is, for example, disliked by his associates, makes trouble, or undermines the morale of the group. Similarly, a man may have the necessary interest, but if he has independent means he will probably not exert himself sufficiently to make a real success. If he does not possess the interests of life insurance men he may be honest and industrious but he will usually fail, and if he doesn't he will succeed at the price of daily disliking his work, which is a very great handicap.

Selection of men for the insurance business must be more or less on the "all or none" basis. If a man lacks the requisite honesty and personality, he should not be considered. Second, he should not be considered if he lacks the requisite interest (A and B+ rating and possibly B rating). Third, if he does not have the necessity of earning a living, he should ordinarily not be employed. After studying the production records of many thousands of salesmen, not only in the insurance business but elsewhere, the writer is convinced that among men with the requisite honesty, personality, interest and ability, the most important factor determining amount of production is the standard of living the salesman has set for himself and the necessity of maintaining that standard through his selling efforts. If a man is used to living on \$1500 a year he will usually earn no more, if he is used to \$5000 a year he will earn that amount. Any one of these men could double his sales if he really wanted to. The increased production during a sales contest is ample proof of this fact.

In other words, even interest, character and ability may not mean maximum production. Incentive or "drive" must be added.

SUMMARY

Successful life insurance agents score higher in life insurance interest than unsuccessful agents and men in general.

Although many men with low life insurance interest ratings enter the business, very few continue in it and still fewer write a satisfactory volume.

Judging from our data, 85 per cent of insurance agents with an A interest rating write \$100,000 or more insurance a year in contrast with 51 per cent of B+ men, 44 per cent of B men and 25 per cent of C men. In terms of an annual volume of \$150,000 paid-for insurance 67 per cent of A men are successful in contrast to 43 per cent of B+ men, 21 per cent of B men and only 6 per cent of C men.

Many factors contribute to success in selling insurance. It appears that for a man to be successful he must have a sufficient amount of each factor. It is rather questionable whether absence of one factor can ordinarily be offset by unusual amount of another. Certainly no amount of ability to meet people compensates for dishonesty or for lack of economic necessity to earn a living. Applicants should be employed only when they have the requisite amount of each of the factors contributing to success.

The data establish the fact that there is a genuine relationship between interest and ability, but they are inadequate for determining the exact relationship.

Work Interests of Junior Executives

By CLARENCE FRASER, *Bell Telephone Company of Canada*

To picture the varied types of work done by younger executives and to ascertain in systematic interviews their preferences for these different kinds of work, helps both men and management.

IN ONE of the operating departments of a telephone company, a small number of men supervise the conditions necessary to establishing connections. Such supervision requires knowledge of the operation of all telephone equipment, of operating practices, of force arrangements to meet an ever-changing load, and of wages and working conditions, for large numbers of women workers. It demands skill in interviewing, in conducting conferences, in writing narrative reports and in constructing statistical summaries. Personal qualities called for are appearance and manner, oral and written expressiveness, tact, judgment, imagination, leadership, organizing ability and coöperativeness. These qualifications of knowledge, skill and personality are necessary to control, with the associated organization, the rapid ebb and flow of thousands of calls in simultaneous motion.

To provide men capable of managing territorial districts and divisions of such a network, a careful employment and training plan is followed. An annual graphic rating is applied by two supervisors against each man in the department. This rating is designed to measure the progress in his

work of each man, including men already appointed to the management of district and division areas, and their assistants.

In order to find a way of determining the types of work that appeal most to men in such a group, a study was made as follows. Seven junior men were selected. Of this group, the ages ranged from 27 to 34, with an average of 30 years. The lengths of service range was 4 to 10, with an average of $6\frac{1}{2}$ years. All were university men, 2 having taken engineering, 3 arts, 1 arts and law, and 1 commerce and finance. Each man was considered fully trained for his position and successful in it.

Listing Work Interests. In order to list the work done by supervisory and engineering men in this company, against which these men could record their interests, a number of headings were selected. Work on which a man may specialize by devoting most of his time to it was distinguished from field management where a great many diverse pieces of work must be directed. This distinction came out of interviews held the previous year, when men had appeared to favor one of these general classes of work more than the other. Specialized work was then sub-grouped

INTERESTS IN TYPES OF TELEPHONE WORK DONE BY ENGINEERING AND SUPERVISORY MEN

The nature of your background puts you in the group of men in this company, termed "Engineering and Supervisory." So that both you and the company may gain the most from your work, it is important that the work that interests you most be known. You are asked to record your interests in the two sections below.

Specialization

Study the following four classes of work, then indicate which one you would prefer most, by entering 1, in the box to the right of the paragraph describing that class. Enter 2, 3 and 4 to show your second, third and fourth choices respectively, in the proper boxes.

Then consider the particular department in which you would prefer to do each class of work, and show the numerical order of your preference; 1, meaning first choice, by entering the proper numbers in the boxes below each paragraph describing each class. The meanings of the department codes are shown at the bottom of this form.

1. *Engineering Equipment*—involves design, quantity, location, layout, construction, maintenance and repair of outside, station and central office telephone equipment. This work is done mainly in the Engineering Dept. and the three operating departments—Commercial, Plant and Traffic. It calls for a knowledge of and interest in mathematics, the natural sciences and similar subjects.

Choice
of Class

- EN ☐ C ☐ PL ☐ T ☐
2. *Analytical and Statistical*—involves accounting of departmental and company performance, especially in terms of cost but with departmental quality measurements also; some statistical work on economic trends is included. This work is done in the Financial, Accounting and the three operating departments. It requires a sound knowledge of and interest in mathematics especially, with statistics and economics important additions.

- A ☐ C ☐ F ☐ PL ☐ T ☐
3. *Constructing Methods of Operation and Narrative Records*—involves writing circulars, narrative reports, publicity, etc. This type of work is done in all departments, but is a specialty in the Publicity Dept. It requires ability and interest in the use of language and composition.

- A ☐ EN ☐ EX ☐ C ☐ F ☐ PL ☐ PU ☐ T ☐
4. *Personnel Administration*—involves selection, placement, training and compensation of the individual employee and measures to retain the workers' good-will toward group co-operative efficiency. This work is done in all departments but is a specialty in the Executive Dept. It requires a knowledge of and interest in psychology, sociology and economics

A ☐ C ☐ EN ☐ EX ☐ PL ☐ T ☐

Field Work

Instead of specializing on any one of the classes of work shown above, would you prefer supervisory or management field work?

Check: Yes ☐ No ☐

If you have checked "Yes," what department would you prefer? Check numerically:

C ☐ PL ☐ T ☐

Department Codes

- | | |
|----------------|--------------|
| A Accounting | F Financial |
| C Commercial | PL Plant |
| EN Engineering | PU Publicity |
| EX Executive | T Traffic |

Signature.....

Date.....

Note: If you wish to add any comment, use reverse side.

FIG. 1

Specialization

	Engineering Equipment	Analytical and Statistical	Methods and Nar- rative Records	Personnel Admin- istration
	1	2	3	4
Executive Dept.				
Ass't to Vice-President		V	V	V
Publicity Manager			V	
Secretary Treasurer		V		
Financial Dept.		V		
Accounting Dept.				
Assistant Comptroller		V		
Chief Accountant (incl. statistician) and methods		V	V	
Chief Traveling Auditor		V		
Auditor of Areas		V		
Operating Department				
Directory Manager		V	V	
Rate Engineer		V		
Sales and Development Engineer		V	V	V
Plant Extension Engineer	V			
Transm. & Foreign Wire Relations	V			
Staff Engineer	V	V		V
Inventory and Cost Engineer	V	V		
Commercial Department				
Gen'l Comm. Supervisor		V	V	V
Gen'l Comm. Engineer	V	V		
Sales Promotion Manager		V	V	V
Engineering Department				
Buildings and Equip. Engineer	V			
Outside Plant Eng'r	V			
Plant Extension Eng'r	V			
Transmission Eng'r	V			
Plant Dept.				
Gen'l Plant Supervisor	V	V	V	
Gen'l Employment and Safety Supv'r		V	V	V
Traffic Dept.				
Gen'l Traffic Supervisor		V	V	
Gen'l Traffic Engineer	V	V		
Gen'l Employment Supervisor		V	V	V

Field Work

Includes division and district work in Commercial, Plant and Traffic Depts.

FIG. 2

into engineering, analytical and statistical, writing, and personnel administration. These subdivisions were associated with the supervisory or engineering work done in all departments. This appeared necessary to permit each man expressing a work interest, to relate it to a particular department. A form was then designed (see fig. 1) for each man to study and enter. An associated form showing where each of the various classes of work is done, by departments, was also provided (see fig. 2).

The Interviews. Each man was allowed a few weeks to clear his mind on his own interests and was then interviewed. The interviewer was a supervisor who had become quite well acquainted with all the men during practically their entire period in the company. While the interviews were guided by the interviewer toward a frank expression of the interviewee's work interests, ample time was allowed to talk around each point and to get behind a stated preference. Each man realized that his future appointments might be influenced by his stated choices. An attitude of thoughtful self-interest was shown in every case.

Work Interests and Early Environment. One pertinent fact appeared in a number of interviews. A man would trace a dislike for some class of work to some experience early in his life. For example, a dislike for mathematics was traced, quite voluntarily, back to school-days, when difficulty in doing arithmetic had been aggravated into a strong distaste by the driving tactics of a school teacher. Another man traced a hesitancy in

and a distaste for speech and writing to a boyhood spent in the country, where an opportunity to practice the use of a broad vocabulary had not existed. One man attributed a dislike for work which involved meeting people to a boyhood in the country and to nicknames applied in school, associating him with a rural upbringing. Another, who placed management as a first choice, said that as a boy he had enjoyed watching his father, a foreman, "boss" his men, and that he had not played games unless he could be the captain.

Work Interests and Type of University Training. Of the two men who had taken engineering courses, one placed engineering work as a third, and the other as a fourth choice. Both put management first, analytical and statistical work second. One put personnel administration third, and the other fourth. Both put writing last. Both appeared to dislike "routine" engineering.

Of the three men who had taken arts, two put management first, while the third man gave analytical and statistical work first choice. All put engineering as last choice because their education had not equipped them sufficiently with the physical sciences. Writing, which one might expect would place high with men of this scholastic background, was placed as second, third and fourth choice, respectively.

The man with arts and law schooling, chose as follows: management, analytical and statistical, personnel administration, writing, engineering.

The commerce and finance man voted strongly for publicity writing as

first choice followed by management, personnel administration, analytical and statistical, engineering. Despite his schooling in accounting, he was "more interested in people and ideas than in statistics."

Work Interests and Leisure Interests. One man, with first choice analytical and statistical work, said in idle moments he amused himself by mentally multiplying three digit figures together.

A man with university engineering background, who puts personnel administration ahead of engineering choice, said his field of reading is in sociology, psychology, economics and philosophy.

A man with a dislike for mathematics but a growing interest in personnel administration, is making a careful study of anatomy. His personal library is well stocked with medical texts.

The man who puts publicity writing as first choice, keeps a portable typewriter at home and essays odd bits of imaginative writing.

Work Interests and Capacities. Most of the men avoided selecting as high

choices, types of work for which they knew they were not fitted by capacity. With one exception, the men appeared to choose as first choice that which they appear to do well. Evidently, they were not only expressing their work interests, but in their self-analysis they had coupled interests with capacities.

USES OF THE STUDY

1. This inquiry has already resulted in one transfer to other work from the fourth choice to a second choice for this man: his first choice is not yet available. The desirability of transferring another man from his second to his first choice is seen.

2. Each man has oriented himself in his preferences and capacities, in relation to types of work available. This is considered as basic to the continuation of a self-directed learning process.

3. It has opened up to higher management a view of the possibilities of this subjective approach to a man's interests in enlisting them toward the purposes of the undertaking.

The A-S Reaction Test

A Study of Beckman's Revision

BY SAMUEL N. STEVENS, *Northwestern University*, AND ELDON F. WONDERLIC,
Household Finance Corporation, Chicago

The authors make available the results of their experience with Beckman's revision of the Allport Test of Ascendence Submission, which has been used as a measure of a person's disposition to dominate his fellows.

IN THE PERSONNEL JOURNAL for April, 1933, R. O. Beckman,¹ presented a revision of the Allport² Test of Ascendence-Submission, Revised for Business Use. On both the original and revised form, the test presents to the subject many situations in which he is required to indicate his customary behavior by checking one of a number of responses which are positively and negatively weighted in scoring. A sum of the weights gives a final score which, if positive, is supposed to indicate degrees of ascendent types of personalities and, if negative, indicates a submissive personality.

Beckman's revision is a much shorter form than the original A-S Test. He eliminated all of the academic situations, so that the number of questions was reduced from 41 to 27. An internal analysis and reweighting of many questions was the most significant alteration.

We have used the revised form in one of the largest personal finance companies in connection with a standardized selection procedure. The test was administered to 201 male applicants for positions and to 141 branch office managers. The position as branch office manager in the company is one which requires a minimum of three years' successful contact and investigation work within the organization.

Table 1 shows the distribution of the scores of these applicants and managers. Applicants have been grouped according to their previous occupations. No job classification was made of individuals who had less than six months' experience. These norms may be compared with those presented by R. O. Beckman. The range, median, and mean for these groups are considerably different from those presented by Beckman although approximately the same number of cases were studied.

The distribution of applicants' scores does not cover the entire range suggested by the author. Our distribution curve is decidedly skewed toward

¹ R. O. Beckman. Ascendence-Submission Test-Revised, *The Personnel Journal*, 1933, 11: 387-392.

² G. W. and F. H. Allport. A Test for Ascendence-Submission, *Journal of Abnormal and Social Psychology*, 1928, 23: no. 2.

TABLE 1
Distribution of scores by occupation (342 cases)

GROUP	N	RANGE		MEDIAN	MEAN
		-	+		
Applicants for positions.....	201	26	44	9.5	10.37
General Salesmen*.....	70	26	18	4.5	3.08
Jr. Executives.....	22	9	44	15.0	12.40
Sales Clerks.....	21	12	33	5.0	6.33
Clerical workers.....	33	16	42	13.0	11.54
Branch Office Managers.....	141	22	35	5.3	5.38
Total Distribution.....	342	26	44	6.8	8.29

* More than 6 months at these positions.

TABLE 2
*Comparative norms on A-S Reaction Test
revised for business use*

DECILE	RANGE OF SCORES			
	201 applicants		Beckman's norms	
10	-26.0	-6.2	-51	-16
9	-6.1	-2.2	-15	-10
8	-2.1	+3.0	-9	-6
7	3.1	6.0	-5	-2
6	6.0	9.5	-1	+1
5	9.6	13.4	2	4
4	13.5	17.3	5	8
3	17.4	21.0	9	14
2	21.1	26.6	15	20
1	26.7	44.0	21	49
Median..	9.5		1	
Mean...	10.37		1.4	

TABLE 3
*Frequency distribution of A-S Reaction Test
scores (201 unselected applicants for
positions)*

SCORES	<i>f</i>	ACCUM. <i>f</i>
-26 to -23	2	2
-23 to -20	1	3
-20 to -17	0	3
-17 to -14	3	6
-14 to -11	3	9
-11 to -8	5	14
-8 to -5	5	19
-5 to -2	17	36
-2 to +1	10	46
1 to 4	14	60
4 to 7	20	80
7 to 10	17	97
10 to 13	15	112
13 to 16	17	129
16 to 19	16	145
19 to 22	15	160
22 to 25	10	170
25 to 28	12	182
28 to 31	6	188
31 to 34	3	191
34 to 37	5	196
37 to 40	2	198
40 to 43	2	200
43 to 46	1	201

the positive end of the scale. The established mean for an unselected group is plus 1, and the median is 1.4. The mean and median for our group of unselected applicants is more than 9 points higher.

The distribution of scores of applicants as presented in table 2 suggests that the test lacks the capacity to furnish a satisfactory curve, throwing into relief the individual differences among subjects. There is no strong

modal class interval, the curve being quite flat between plus 18 and plus 4.

The correlation ratio (eta) between

the Otis Test of Mental Ability, Higher Examination (Form A), and the revised A-S test was found to be $.30 \pm .015$. (339 cases); variation taking place in the same direction from their respective means. The unreliability of the difference between η and r^2 indicates that the relation is decidedly non-linear. The size of the correlation ratio suggests either that there is a slight over-

lapping in the abilities measured by these two tests, or that more intelligent applicants are better able to figure out which answers to give in order to increase the likelihood of employment.

In the light of these findings it is suggested that before the revised form of the Allport Ascendent-Submission test is adopted as a diagnostic part of an employment procedure, it should be subjected to further experimentation.

A New Scale for Gauging Occupational Rank

BY R. O. BECKMAN, *Farm Credit Administration, Washington, D. C.*

OCCUPATIONS may be classified or grouped on any one of several bases, depending upon the purpose or objective sought. The type of classification most frequently used is one for purposes of personnel administration and the establishment of compensation plans; here jobs are analyzed and positions involving similar duties and qualification requirements are brought together into classes and groups. The Federal Census classification on the other hand is largely a broad industrial one and groups together the occupations found in ten broad fields, such as agriculture, trade, and manufacturing and mechanical industries.

A specialized kind of classification which has possible applications in studies of employment trends, in sociological research, and in vocational guidance may also be devised to gauge the relative rank or level and prestige of a given occupation in the present-day social economy. The construction of what might be termed a "vertical" classification of this kind—in essence a socio-economic scale—is in itself not very difficult. It is, however, usually an easy matter to criticize such a classification since it is generally predicated upon subjective opinion rather than objective evidence. This will be appreciated by anyone who has tried, in a wage setting pro-

gram, to compare the relative values to society of widely different occupations. How much, for example, is a draftsman worth as compared to an undertaker, a bookkeeper to a hoisting engineer? In popular conception, which job carries more prestige—that of a street car conductor or a bank guard?

In evaluating the work of the Adjustment Service, a project which in 1933-34 counselled some 13,000 unemployed adult residents of greater New York, it was felt desirable to group the occupations of these persons by means of a simple scale or ranking device. Their occupations had already been allocated in terms of the Census classification (modified to some extent to meet the special needs of the Adjustment Service) but this classification was too complex to permit a ready understanding of how they were distributed according to status or level. A new socio-economic scale of occupations would perhaps give a better and simpler picture of the clients served and an opportunity to gauge the extent to which they were redirected vocationally into higher or lower fields.

A cursory inquiry concerning available occupational scales disclosed none that seemed either appropriate or to have demonstrated its statistical validity. They were all designed for other uses. No critical examination was

made of existing scales, however, until after the scale here described had been applied in coding the occupations of Adjustment Service clients. What seemed to be needed under the circumstances was some grouping which would readily indicate the rank of any occupation on the basis of the *intelligence, capacity or skill, education and training required* for its pursuit. Such a scale should also reflect the socio-economic prestige attached to a given occupation, unless prestige be adjudged solely on the basis of earnings. To base the classification upon income would result in placing the stock promoter far above the clergyman or teacher, for example.

A new occupational scale was therefore devised by the writer in consultation with Adjustment Service executives and Dr. Henry C. Link. This scale grouped the important titles of the Census classification into five ranks or grades. The three higher grades were further broken down into functional subdivisions, of value in making a more detailed analysis of the clients counselled. The plan as finally revised is illustrated in the following tabulation:

- Grade 1—Unskilled Manual Occupations
- Grade 2—Semi-Skilled Occupations
- Grade 3—(a) Skilled Manual Occupations
 - (b) Skilled White Collar Occupations
- Grade 4—(a) Sub-Professional Occupations
 - (b) Business Occupations
 - (c) Minor Supervisory Occupations
- Grade 5—(a) Professional (Linguistic) Occupations
 - (b) Professional (Scientific) Occupations
 - (c) Managerial and Executive Occupations

In so far as they were represented among the clients of the Adjustment Service, all the more important classifications used in the Census reports were assigned to one of the five ranks. Among other data, the modal (past) occupational rank of 5,082 clients and the rank of the occupation recommended in the course of the counselling program were then entered on tabulation punch cards. A picture of the occupations included within each grade may be gained by referring to the table at the end of this article; this shows the grade allocation of all important occupational classes listed in the Federal Census rather than those found only among Adjustment Service clients.

The distribution by occupational grades of the working population of the United States (all gainful workers ten years old and over) in 1920 and in 1930 is shown in table 1. This confirms the occupational trends described by Dr. Walter V. Bingham in the magazine *Occupations* (February, 1934 number), but shows a proportionate decrease in the lower grade occupations and an increase in the higher grade vocations in terms of a different classification scheme. The largest decrease appears in the ranks of skilled manual workers, the largest increase among white collar workers, both included in Grade 3 of the scale.

The figures in table 1 are necessarily approximate because of the difficulty of allocating the titles used in the Census classification. More or less arbitrary decisions necessarily had to be made. Thus, "Owners and Managers" of truck, transfer, and cab companies were placed in Grade 4 (b), while "Managers and Officials" of the

same enterprises were placed in Grade 5 (c). Such a distinction is indicated by reference to the "Classified Index of Occupations," a handbook used by Census enumerators which includes what appear to be lower grade jobs in the first named classification and managers, presidents, and superintendents in the second group. Supporting evidence warranting such an allocation

classed as "skilled." There are, of course, some low grade jobs included in the latter group just as there are machine setters and other experts included in the former. Another factor restricting a precise comparison of the number of workers in 1920 and 1930 is the change made by the Census Bureau in its classification. In 1930, for example, more than a million

TABLE 1

Number and per cent of workers gainfully employed in 1920 and 1930, by occupational grades

GRADE	NUMBER EMPLOYED 1920	PER CENT 1920	NUMBER EMPLOYED 1930	PER CENT 1930	VARI- ATION IN PER CENTS
1. Unskilled Manual.	10,327,280	24.9	11,949,885	24.4	-.5
2. Semi-Skilled.	6,514,296	15.6	7,184,175	14.7	-.9
3A. Skilled Manual.	13,879,775	33.3	14,523,739	29.3	-4.0
3B. Skilled White-Collar.	4,978,862	11.9	6,905,194	14.0	+2.1
<i>Total, Grade 3.</i>	18,858,637	45.2	21,428,933	43.3	-1.9
4A. Sub-professional.	418,250	1.1	673,644	1.3	+.2
4B. Business.	2,221,513	5.4	3,287,103	6.7	+1.3
4C. Minor Supervisory.	657,060	1.5	689,936	1.3	-.2
<i>Total, Grade 4.</i>	3,296,823	8.0	4,650,683	10.3	+2.3
5A. Professional (Linguistic).	1,231,409	2.9	1,724,248	3.5	+.6
5B. Professional (Scientific).	579,162	1.5	840,530	1.8	+.3
5C. Managerial and Executive.	806,641	1.9	1,051,466	2.1	+.2
<i>Total, Grade 5.</i>	2,617,212	6.3	3,616,244	7.4	+1.1
Grand Total.	41,614,248	100	48,829,920	100	+17.3

may be found in the fact that there are three times as many workers in the first group as in the second. "Operatives" in manufacturing and mechanical industries were placed in Grade 2 (Semi-Skilled) and 3 (a) (Skilled Manual) for the most part, depending upon the degree of skill required of workers in general in the particular industry. Thus workers in food and candy factories were classed as "semi-skilled" while printers and bookbinders were

building construction laborers appear for the first time in a distinct classification and no comparable figures are available for 1920. However, it is probable that the large numbers involved tend to minimize the probable errors of allocation and that table 1 may be regarded as giving a fair picture of the gradation of the American working population.

The distribution of occupations of clients of the Adjustment Service is

entirely different from that of the country as a whole, since this project was designed to serve mainly the white collar class in the metropolis. Table 2 gives comparison of the two distributions.

After the Census classifications had been allocated in terms of the new occupational scale, an effort was made to reconcile the figures in table 1 with those published by Dr. Florence L. Goodenough¹ in connection with a scale used in Minnesota in classifying the parents of school children. There was found to be some evidence that certain groups were comparable in

TABLE 2

Occupational distribution of Adjustment Service clients compared with 1930 census distribution

		GRADES AND PER CENTS				
		1	2	3	4	5
Entire	Working					
Population.....		24.4	14.7	43.3	10.3	7.4
Adjustment Service						
Clients.....		4.3	1.7	36.7	28.1	29.2

size under the two classifications. Others could not be reconciled, however. The Minnesota classification of "Clerical, Skilled Trades and Retail Business," for example, was reported as comprising 14.42 per cent of the 1920 working population as compared to 50.6 per cent of workers in the occupational scale here discussed.

An examination of the occupational scale used in the National Survey of

Secondary Education² was also made after the present scale had been applied. It was found that the five occupational levels devised by Dr. Kefauver in that survey corresponded very closely with the grades which had been set up for the Adjustment Service. However, the Census classification cannot be directly translated into the grades of the Kefauver scale and the latter is open to question in its allocation of many occupations to their appropriate grades. For example, the grouping of such skilled occupations as bakers, hotel chefs, clothing cutters, merchant tailors and auctioneers in a "Semi-skilled Group" with such subordinate vocations as delivery men, yardmen, ticket collectors, peddlers and junkmen suggests a lack of familiarity with actual work requirements and earnings in the employment field. The findings of the educational survey in question in so far as the socioeconomic status of high school pupils is concerned might well have been far more conclusive had such seeming errors in job classification been avoided. For the purposes desired, the earlier scale devised by Dr. George S. Counts and also used in the National Survey, appeared to have produced better results.

The new occupational scale here described had been set up on a purely presumptive basis; it represented opinions without reference to considerations of validity. Not until the occupations of 5,000 Adjustment Serv-

¹ The Minnesota scale is discussed in the *Journal of Genetic Psychology*, Vol. 41, No. 2 and in "Experimental Child Study," Century Co., New York, 1931.

² Contained in *The Secondary-School Population*, Monograph No. 4, National Survey of Secondary Education, by Kefauver, Noel, and Drake. Office of Commissioner of Education, Washington, 1932.

ice Clients had been graded and the grades compared statistically with other data pertaining to the clients in question was it known whether the scale actually gauged what it was designed to gauge. To what extent did it really classify occupations on the basis of the intelligence, education and capacity required for their performance?

When the highest year of schooling completed was compared with the grades of the past and recommended occupations, in the case of the 5,000 clients for whom these data were coded, it was found that the length

due to the fact that the Adjustment Service served a rather highly selected group and also to the economic depression, which threw many young persons recently out of school into menial work since there was no other work to be had. What appears to be too short an educational experience for professional workers and executives classed in Grade 5, is attributable to the combination of the two groups at the same socio-economic level and the inclusion in the Adjustment Service group of a considerable number of persons classed in such professions as teachers, musicians and music teach-

TABLE 3

Average years of schooling in relation to occupational rank

	OCCUPATIONAL GRADE				
	1	2	3	4	5
	yr.	yr.	yr.	yr.	yr.
Modal (past) Occupation.....	9.6	9.4	10.3	11.4	13.2
Recommended Occupation.....	8.9	9.1	10.6	11.3	13.1

of education correlated directly with the occupational grades: the higher the grade, the longer the educational training. This situation is summarized in table 3.

The education of clients in relation to recommended occupations is more consistent than that of their past occupations, it will be noticed, and may suggest the propriety of the counselling service rendered. The average schooling of persons who had been employed in Grade 1 is somewhat greater than those employed in Grade 2. The relatively good educational showing of persons in the two lower ranks is

TABLE 4

Occupational rank in relation to intelligence

GRADE	MEDIAN SCORE	
	Modal occupation	Recommended occupation
1	.55	-.08
2	-.26	-.18
3	.44	.40
4	.80	.81
5	1.08	1.19

ers, writers and reporters, social workers and others who did not need four years of formal college training at the time they received their education in order to qualify under the professional classification.

A similar stepping up is seen when occupational ranks were compared with median sigma scores on the Pressey Senior Classification Test (a mental alertness test). The median sigma score for this test is approximately zero. The sigma scores are in terms of norms developed from a sampling of the adult population tested in the Minnesota employment stabili-

zation experiment. The comparison is given in table 4.

Test scores in Grade 1 will be seen to be higher than might be expected because of the young workers forced into low grade work during the depression. When the median scores of the grade subdivisions are examined they show similar trends. The median score for those men for whom skilled

TABLE 5

Modal occupational rank and vocabulary test scores

GRADE	MEDIAN SCORE
1	100.7
2	89.5
3	106.9
4	116.9
5	123.0

here, as with the Pressey scores and the length of schooling, is in the unskilled manual group. This is shown in table 5.

In evaluating the nature of the vocational guidance given to Adjustment Service clients, a comparison may be made of the extent of occupational redirection by occupational grades. Tables showing the percentage of clients in each grade, according to their past or modal occupational rank, as redistributed on the basis of different occupational ranks suggested, are shown in table 6. Separate tabulations appear for men and for women.

By reference to the table it will be seen, by way of example, that 38 per cent of the men who had been employed in Grade 1 occupations were advised

TABLE 6

Per cent of redirection by occupational rank

MEN RECOMMENDED GRADE					MODAL (PAST) OCCUPATIONAL GRADE	WOMEN RECOMMENDED GRADE				
1	2	3	4	5		1	2	3	4	5
19.1	0	38.0	14.7	28.3	1	32.9	0	23.3	20.5	23.3
2.2	29.7	36.3	9.9	22.0	2	10.5	42.1	26.3	5.3	15.8
1.4	0.7	55.7	14.5	27.7	3	2.8	0.5	69.4	12.8	14.6
0.3	0.1	13.4	57.1	29.1	4	2.5	0	17.4	63.5	16.6
0.6	0.5	8.1	10.5	80.3	5	1.6	0.2	13.2	10.2	74.8

manual work was suggested, for example, is .3, that of skilled white collar workers, .7. The scores for the men for whom Grade 5 jobs were suggested averaged as follows: Managerial and executive, 1.1; professional (scientific) 1.3; and professional (linguistic) 1.35.

As in the case of the intelligence test scores, the tabulation of past occupational rank with O'Connor Vocabulary Test scores shows a higher score for each succeeding rank. The exception

to enter Grade 3 occupations, etc. For the most part, large numbers of clients in each of the lower groups were urged to improve their circumstances by seeking work of a higher level. In general, the largest per cent in each grade was advised to continue in work of the same general level. The tables shown above appear to suggest reasonable consistency on the part of the occupational scale and of the vocational guidance given.

A comparison of the occupational grades with length of unemployment was also made but showed no trends of significance. The average length of unemployment for the five grades ranged from 5.7 months among the unskilled to 11.3 months among managers and executives and 11.8 months among skilled manual workers.

A vocational scale of the type here described would be of value in occupational analyses of various kinds. Its validity can apparently be demonstrated statistically in a manner which has been difficult or impossible in the case of earlier scales of a similar nature. In addition to its possible usefulness in statistical evaluation of the nature of vocational guidance rendered, the following applications might perhaps be suggested: in revealing vocational trends as reported in Census reports; in understanding the socio-economic distribution of wage earners in connection with community surveys; in measuring the extent of the democratization of secondary and higher education; in analyzing unemployment statistics in relation to planning welfare activities and budgeting relief funds; in setting up hypothetical test norms representative of a cross section of the adult working population; in classifying and interpreting responses to attitude scales or questionnaires used in market or sociological surveys; and in making comparisons of earnings in wage studies.

APPENDIX

REPRESENTATIVE TYPES OF OCCUPATIONS IN EACH GRADE OF THE OCCUPATIONAL SCALE

(In general, only those census classifications in which 25,000 or more persons were

employed in 1930 are included; a few occupations of lesser occurrence are shown for purposes of illustration. The order follows that of the United States Census statistics of occupations.)

Grade 1—Unskilled Manual Occupations

Farm laborers
Lumbermen, raftsmen and woodchoppers
Laborers (construction, manufacturing, road, warehouse, etc.)
Longshoremen and stevedores
Sailors and deckhands
Garage, trucking and stable hands
Deliverymen
Newsboys
Soldiers, sailors, and marines
Attendants (pool rooms, bowling alleys, golf clubs, etc.)
Charwomen, maids, and cleaners
Janitors and sextons
Porters
Messengers and office boys and girls

Grade 2—Semi-Skilled Occupations

Fishermen and oystermen
Mine operatives
Filers, grinders, buffers
Stationary firemen
Furnace and smelter men
Oilers
Operatives in
Chemical and allied industries
Brick, tile, lime and cement works
Foods, beverages, and tobacco
Blast furnaces, rolling mills, iron and steel factories
Tin and enamel ware
Leather industries
Planning, woodworking and paper mills
Cotton and other textile mills
Draymen and teamsters
Baggagemen
Street railroad and bus conductors
Switchmen, flagmen, and yardmen
Truck drivers and chauffeurs
Firefighters
Guards, watchmen, and doorkeepers
Policemen
Housekeepers and stewards
Laundry workers
Waiters

Grade 3A—Skilled Manual Occupations

Farm owners and tenants
 Apprentices to building and other skilled trades
 Bakers
 Blacksmiths, forgemen, boiler makers
 Building trades mechanics
 Printing and publishing trades mechanics
 Dressmakers and seamstresses
 Electricians
 Engineers, stationary and locomotive
 Jewelry workers and watchmakers
 Machinists, millwrights, and toolmakers
 Transportation mechanics
 Milliners
 Moulders, founders and casters
 Painters and glaziers
 Paper hangers
 Pattern and model makers
 Shoemakers and cobblers
 Tailors and tailoresses
 Operatives in
 Glass and pottery
 Clothing industries
 Automobile factories
 Furniture, piano and organ factories
 Electric light and power plants and supply factories
 Railroad firemen and brakemen
 Motormen
 Barbers, hairdressers and manicurists
 Practical nurses and midwives
 Cooks (hotels, restaurants, etc.)

Grade 3B—Skilled White-Collar Occupations

Freight and express agents
 Mail clerks and carriers
 Radio, telegraph and telephone operators
 Clerks in stores
 Inspectors, gaugers and samplers
 Canvassers, demonstrators and sales persons in stores
 Marshals, sheriffs, detectives, etc.
 Dentists' and physicians' assistants
 Boarding and lodging housekeepers
 Collectors
 Bookkeepers and cashiers
 Office clerks
 Stenographers and typists

Grade 4A—Sub-professional Occupations

Opticians
 Undertakers

Actors and showmen
 Designers, draftsmen and apprentices, and inventors
 Photographers
 Trained nurses
 Apprentices to various professional persons
 Healers (not elsewhere classified)
 Religious workers
 Technicians and laboratory assistants

Grade 4B—Business Occupations

Owners and proprietors of garages, truck and cab companies
 Conductors (steam railroads)
 Postmasters
 Advertising agents
 Commercial brokers and commission men
 Loan brokers and pawnbrokers
 Commercial travellers
 Decorators, drapers, and window dressers
 Insurance agents
 Proprietors of employment agencies, grain elevators, warehouses, etc.
 Real estate agents
 Retail dealers
 Sales agents and auctioneers
 Wholesalers, importers, exporters
 Billiard room, dance hall, theater and amusement resort keepers, etc.
 Hotel keepers and managers
 Laundry owners, managers, and officials
 Restaurant and lunchroom keepers
 Credit men and purchasing agents
 Floorwalkers and foremen in stores

Grade 4C—Minor Supervisory Occupations

Farm managers and foremen
 Mine foremen and overseers
 Manufacturing foremen and overseers
 Captains, masters, mates, pilots
 Foremen, overseers and inspectors, transportation and communications
 Foremen, miscellaneous trades
 Keepers of charitable and penal institutions
 Cemetery keepers

Grade 5A—Professional Occupations (Linguistic)

Authors, editors and reporters
 Clergymen
 College presidents and professors
 Lawyers, judges, and justices

Musicians and teachers of music
Teachers
Librarians
Social and welfare workers and related
occupations

*Grade 5B—Professional Occupations
(Scientific)*

Architects
Artists, sculptors and teachers of art
Chemists, assayers, and metallurgists
Dentists
Physicians, surgeons, osteopaths
Technical engineers (civil, electrical, etc.)
Veterinary surgeons
County agents, farm demonstrators, etc.
Accountants, auditors and actuaries

*Grade 5C—Managerial and Executive
Occupations*

Owners and managers of log and timber
camps
Mine operators, managers and officials
Manufacturing managers and officials, and
manufacturers
Garage, transfer and cab company managers
and officials
Railroad officials and superintendents
Other transportation proprietors and
managers
Bankers and bank officials
Stock brokers and promotors
Managers and officials, insurance companies
Managers and officials, real estate com-
panies
Government officials and inspectors

News Notes

INDUSTRIAL RESEARCH AT THE WHARTON SCHOOL

For many years one of the country's outstanding research centers, the Industrial Research Department of the Wharton School of Finance and Commerce has under way a number of studies of particular interest. Leading the list is C. C. Balderston's study of industrial relations plans in twenty-five leading companies. His report will present the plans in case form, draw inferences from these, set up a standard for judging industrial relations plans, and give a brief description and analysis of each of the sixteen industries in which the companies are located. This report will be published soon. Gladys L. Palmer is continuing her analyses of the labor supply, including the relative overcrowding in different occupations, and characteristics of the unemployed which affect their employability. Emmett H. Welch is directing an analysis of the data of unemployment censuses, while Hiram S. Davis is developing a comprehensive index of employment, payroll, and man-hours for the wool textile industry.

SALARY STANDARDIZATION

Metropolitan Life Insurance Company's Policyholders Service Bureau has published a survey of practices in *Salary Standardization and Administration*. Current methods of job analysis, job evaluation and grading, salary scheduling, and related topics are described. Sample schedules, forms, and job classifications are presented. Copies of this report can be secured from the Bureau, 1 Madison Avenue, New York.

FIRST YEAR OF THE U. S. E. S.

During the first year of its reorganized existence, the United States Employment Service registered and classified 12,634,974

persons and placed 6,951,523 in private or Government jobs, according to a report of the Service ("Twelve and a Half Million Registered for Work." Washington: Government Printing Office, 1934). Of the placements, 4,123,925 were on civil works, 1,403,358 were on public works and public-road projects, 1,305,873 were in private employment of all kinds, and 118,367 were in governmental service, either local, State, or Federal. A month-by-month record of placements with private business concerns reveals progressive increase in the effectiveness of the Service. The report includes a description of the fundamentally important program of standardization of employment records.

NEW YORK ADULT EDUCATION COUNCIL

The New York Adult Education Council now publishes a semi-monthly *Bulletin* as a means of bringing to the attention of its members the many courses, lectures, exhibitions, and other educational facilities available to adults.

LABOR LEGISLATION

The Proceedings of the National Conference for Labor Legislation, held last spring, have just been published as Bulletin No. 583 of the U. S. Bureau of Labor Statistics. Obtainable from Superintendent of Documents, Washington, D. C., at 10 cents a copy.

NATIONAL CONFERENCE ON ECONOMIC SECURITY

Unemployment insurance, child welfare, provision of employment, medical care, and old age security were the major topics of discussion at the National Conference on Economic Security, held in Washington, November 14. The conference was arranged by the Committee on Economic Security.

Except for lunch and dinner meetings, all sessions took the form of round table conferences. At the dinner Frances Perkins, Secretary of Labor, spoke on "The Task that Lies Ahead."

A. F. OF L. CONVENTION

The American Federation of Labor's San Francisco convention was perhaps the most significant in a number of years, chiefly because of the action taken to stimulate the organization of industrial unions, as distinguished from craft unions. This reversal of traditional policy not only gives impetus to unionization in the steel, aluminum, cement, automobile, and other mass production industries, but also will probably have a far-reaching effect on the future character of the American labor movement. Other important actions were the enlargement of the Federation's executive council and the resolution to drive for the six-hour day and five-day week.

Paid-up membership was reported to have reached the 1929 level of over 2,900,000, more than a fourth of these having been enlisted during the preceding year. Total union membership, including those excused from payment of dues because of unemployment, sickness, etc., was placed at 5,650,000.

CALENDAR

December 5 to 8

Annual Convention, American Vocational Association. Pittsburgh.

December 6

American Society of Mechanical Engineers, Management Section. New York.

December 6 and 7

Annual Meeting, Federated Management Societies (Taylor Society and Society of Industrial Engineers). New York.

December 26 to 29

Twenty-eighth Annual Meeting, American Association for Labor Legislation. Chicago.

January 24 and 25

Thirteenth Annual Conference, Personnel Research Federation. New York.

February 6 to 8

Personnel Conference, American Management Association. Pittsburgh.

February 20 to 23

Meetings of National Vocational Guidance Association, American College Personnel Association, Personnel Research Federation, National Association of Deans of Women, National Association of Principals of Schools for Girls, and other organizations interested in guidance and student personnel. Atlantic City.

Personnel Books

EDITED BY O. MILTON HALL

THE SCIENCE OF WORK

By Morris S. Viteles. New York: Norton, 1934, 453 pp., \$4.00

Reviewed by ALLEN B. GATES, *Eastman Kodak Company*

At last we have a discussion of the application of psychology to business, written, by a recognized leader in the field, in a style which can readily be understood by business executives. Unfortunately in the past most worthwhile books on this subject and most attempts by psychologists to present the subject from the platform have fallen on unfertile soil as far as business executives are concerned. The reasons for this are many but chief among them is the fact that for the average business executive the style of presentation in most cases is stilted and involved. Often, the writer or lecturer has devoted so much of his attention to extolling the importance of psychology as a science and the impossibility of the average person untrained in its lore to understand or apply it, that he has had little space or time left to convince the reader or listener of its real value and of the real possibilities of its application in business.

In his treatment of "The Science of Work," Dr. Viteles has reversed this approach to the subject. He has prepared the reader for his presentation by first outlining the need for an understanding, on the part of industrial executives, of the human factors in business. He has then pointed out where and how the application of psychological principles and methods can be used to bring about this understanding and to solve the many perplexing problems in this field.

In his first chapter, "Work Through The Ages," Dr. Viteles has effectually punctured the illusive bubble of "The Good Old Days"

prior to the introduction of the machine. He shows that even in the "Golden Era" of the middle ages when handcraft was exalted to a high degree, the lot of the average person was far less acceptable than that of the same average person in our modern industrial civilization.

In his second chapter, "Work With Machines," he shows that the industrial revolution brought about by the introduction of mechanization, the factory, and new methods led to many changes in the methods of work and in working conditions. He shows that selfishness of investors and those in a position to take advantage of labor in its new environment led to many practices which for a long time were detrimental to the welfare of the average worker. He then points out that progressive managers aided by social legislation have been gradually correcting these conditions. Today the average man in a progressive industrial country and in a progressive industrial organization occupies an economic and social position far above that enjoyed by his predecessors in any previous age or civilization.

In spite of this great improvement brought about by more effective production and working methods, the author points out that there are many conditions which can be improved. In the succeeding chapters he outlines the psychological problems involved in the selection, placement, training, and supervision of the workers as well as in the development of safe and effective

working methods and conditions. He completes his treatment of "The Science of Work" with a chapter on "Working Together" in which he discusses the attitude of Management which is essential to co-operation throughout an organization and some of the measures essential to carrying that attitude into effect.

Personnel workers and industrial engi-

neers will find much in this book that will be helpful. Upper executives, department heads, and all others who are in any way responsible for the accomplishment and well-being of either physical or mental workers can find much to help them understand people and to recognize and correct or forestall possible difficulties before they become serious.

DYNAMITE

THE STORY OF CLASS VIOLENCE IN AMERICA

By Louis Adamic. Revised Edition: New York: Viking Press, 1934, 495 pp., \$2.50

Reviewed by ORDDWAY TEAD, *Harper and Brothers*

Here is a profoundly disturbing book. Its subject matter—the data it has under the microscope—is the uses of violence in the history of American labor's efforts to raise its standard and status in life. The fact that all these data cannot be experimented with or correlated by statistical methods in a quiet laboratory, does not lessen its importance. Nor are the problems it raises any the less related to the conduct of personnel work than scientific studies of fatigue or intelligence in industry.

In short, the book cannot be ignored in a thoughtful approach to management problems. Here is a whole body of data that is scientific raw material. For it bears on such problems as morale-building, the clarifying of management purposes and objectives, the uses of group organizations as agents of negotiation, and the reasons for racketeering in the world of legitimate business.

Why does violence supervene in the relations of employer and employee? Who uses violence and under what conditions? To what extent have the traditional labor unions resorted to violence? Is "labor racketeering" on the increase and does it find any parallel in the activities of employers? Does violence permanently gain ends that are obtainable in no other way? Or is it an evidence of the philosophy that the end justifies the means? If there are permanent gains, what is their nature?

These are profound, inescapable ques-

tions. They probe to the heart of the crucial issues of today—those having to do with the balance of political and economic power. It is less necessary that we have at the tip of our tongues a glib answer to them, than that we acknowledge them as questions the dispassionate study of which can no longer be ignored in that industrial sociology from which in part personnel work derives its *rationale*.

Moreover, this volume does not stand alone as a signpost to unsolved issues. It stems from the source of spiritual and economic disturbance which has recently given us such widely different studies as George Soule's "The Coming American Revolution," John Strachey's "The Coming Struggle for Power," Mary Van Kleeck's "Miners and Management," Reinhold Niebuhr's "Moral Man and Immoral Society," Richard B. Gregg's "The Power of Non-Violence," and Lillian Symes' "Rebel America."

Under one guise or another all of these authors are posing the question: Where does the use of violence ever get us in the melioration of political, social and economic conditions?

The problem as a moral one is not new. On one side stand, for example, the followers of Gandhi, the Quakers, the extreme pacifists. And on the other side the moral prophets take a stand all the way from favoring forcible resistance to aggressive or destructive acts to a glorying in the use of

dynamite to destroy those who block the way to "progress."

The volume here under review does not purport to be a philosophical inquiry into this moral question. It is primarily a record—and in its cumulative effect a sobering one—of when and how blood has been spilled in labor controversies in America.

In a sense the text of the book is the quotation it gives from a French sociologist: "A man is not born an enemy of society. It is the circumstances which give him that title, such as poverty or misfortune. He does not disturb the general tranquility until he has lost his own. He ceases to be a good citizen only when the name becomes meaningless in his case." And Mr. Adamic's own general conclusion is perhaps best suggested by his sentence, "Labor racketeering, as it has begun to develop in the United States, is a natural and even necessary product of powerful and chaotic social and economic forces that have been operating in this country *uncontrolled* since the beginning of the Industrial Revolution." (Italics his.)

Mr. Adamic, it will be seen from this, presents a complementary and confirming view to that elaborated by Lincoln Steffens in his "Autobiography," wherein he accounts for much political corruption by showing it to be the result of the exercise of private economic power to gain ends of special economic privilege.

Sabotage is discussed, as a paler form of violence. And the conclusions reached square with those of the more scholarly study of Stanley B. Mathewson, "Restriction

tion of Output Among Unorganized Workers." No executive who seriously asks himself what he can do to interest his workers in production as a creative outlet can ignore studies of this type, and still expect to arrive at a practically effective answer.

It may be true, as Miss Van Kleeck says in her book above mentioned, that "how socialization will come, is not within the power of a research worker to forecast." It is no doubt true, as Mr. Soule says, that processes of profound social change may be "by a sudden, violent overturn, or by a longer process of trial and error. . . . Doubtless the process will vary in different parts of the world."

The whole problem of the ultimate efficacy of violence does, nevertheless, need dispassionate examination and scientific analysis. It is not merely a matter of temperamental (or glandular!) differences between the meek and the "go-getters." If the meek are to inherit the earth, what is the evidence for it? If the fighters and protagonists of violence are the ones who survive and prosper, what is the evidence?

In a scientific journal such as this, it is at least proper, not to say, highly relevant, to pose questions of this sort—raised as they are by Mr. Adamic's book. For he is no doubt entirely correct in his surmises that the story he is telling "is still developing and developing rapidly." The record shows, in support of his view, that to date this year 46 manual workers have been shot dead in disturbances incident to industrial strikes.

CAREERS FOR WOMEN

By Catherine Filene. Boston: Houghton Mifflin, 1934, 620 pp., \$3.00

Reviewed by EMILY BURR, *Vocational Adjustment Bureau for Girls, New York*

In a panoramic presentation of the careers of 158 women who have achieved success in their chosen field, Miss Filene, acting as editor, has arranged in systematic fashion the graphic story of each woman contributor. There are inspiring articles by such experts—to name only a few—as

Rachel Crothers, playwright; Lillian Gilbreth, industrial engineer; Blair Niles, explorer; Mary Anderson, director of the Women's Bureau, U. S. Department of Labor; Augusta Bronner, clinical psychologist; and Frances Perkins, Secretary of Labor.

Among the occupations described are agriculture, arts, business, dramatics, education, engineering, government, health activities, home economics, law, library work, literary work, music, public relations, radio, scientific work, secretarial work, social work and transportation.

Each contributor, following a set pattern, has suggested the training required for her particular type of work. To this is added, under captions that readily attract the eye, a brief statement of the opportunities for employment likely to be found, the salary range and the chances for advancement that may be expected in each line of work as well as the existing age limits. Bibliographies enhance the value of the volume as a book of reference.

Other books in which work for women has been the theme have presented only a

sketchy and superficial review of relatively few occupations; but this book, although by no means exhaustive, offers an exceptional amount of information in readable form.

The reader is frequently reminded that the only road to skill is application, patient practice, courage and the ability to get along with one's fellows. Into many of the articles contributors have injected something of their own philosophy of life revealing glimpses of what has made their work worthwhile, stimulating and interesting.

These career stories are challenging as well as instructive and the book might well be placed on the shelves of high school and college reading rooms. It would be sure to prove an excellent supplement to the advice of the vocational counselor.

LEADERSHIP

LEADERSHIP AMONG ADOLESCENT BOYS. By E. De Alton Partridge. New York: Bureau of Publications, Teachers College, Columbia University, 1934, 109 pp., \$1.50

LEADERSHIP IN GROUP WORK. By Henry M. Busch. New York: Association Press, 1934, 305 pp., \$2.25

Reviewed by ORDWAY TEAD, *Harper and Brothers*

Study of leadership requires, says the first author, the development of a valid technique of identifying leaders, a study of the characteristics of leaders compared with those of the led, and a study of leaders in action to determine how influence is exercised. And he performs a useful service in collating the results of researches in these directions no less than in setting forth his own studies of boy leaders in a boys' camp and among boy scouts.

The conclusions reached are illuminating and in general in line with the common sense observations on the several points which most students of leadership would be likely to offer. Outstanding leaders excelled their fellows in every characteristic measured; they seemed to be all-around superior individuals,—superior in intelligence, dependability, appearance, athletic ability.

Even the quality of voice tended to identify the leader. Yet there was no typical leader, differences in total personality, appearance and intelligence being great.

The technician will be interested in the methodology of study employed, which is undoubtedly capable of application to other fields where the same problems could profitably be analyzed, if our understanding of the nature and development of leadership is to be advanced.

The applications of the author's conclusions to education seem significant, as pointing to the need within the schools of more "ample opportunity for group experience to operate and for individuals who have qualities of potential leadership to exercise those qualities in a way which will equip them to be of better service to humanity." Also it is fruitfully suggested

that however the gifted child may be specially handled within the formal curriculum, he should have more opportunity of "assuming responsibility and giving leadership to the activities of their fellows."

The bibliography is especially useful.

Professor Busch's study has a different purpose,—to direct the attention of group workers toward basic issues in a way to help their practical efforts at leadership in groups with recreational, civic, and character-building and related objectives.

Naturally, the method of treatment is one which aims to bring to the reader a rapid review of factors of social and educational background and theory, as these affect the techniques of leading. One of the most useful chapters, "Educational Leadership in Action," describes two different types of leader in action and shows how they behaved to get effective results. The following chapters on program making and organization are full of practical sugges-

tions. And the chapter on character education is realistic, constructive and lacking in any aroma of priggishness.

Altogether this is a highly useful book, although for institutional purposes it might well be more inductive with a fuller use of the case method. Here again, the bibliography is widely selected and distinctly helpful.

These books represent a wholesome growth of both awareness and urgency as to the study of leadership, and ways and means of cultivating it and giving it effect. They demonstrate implicitly and explicitly that the characteristics which give power to leadership can be significantly enhanced by training. They both acknowledge that in a democratic society there is a problem of deliberate training for leadership which has to be more fully faced if the covert dangers of dictatorship in all walks of life are to be withstood.

HOW TO INTERVIEW

By Walter V. Bingham and Bruce V. Moore. Revised edition. New York: Harper, 1934, 308 pp., \$3.00

Reviewed by HAROLD B. BERGEN, *Director of Industrial Relations, The Procter and Gamble Company*

It is unnecessary to reaffirm the importance of the interview—the conversation with a purpose—in personnel management, vocational counselling, and other arts drawing upon the psychological and social sciences. It will always be an indispensable tool to vocational counsellors, employment interviewers, industrial relations investigators, market research men, social workers, educators, clinical psychologists and psychiatrists, reporters, and legal investigators. Unfortunately, it has been a relatively inaccurate instrument in comparison with the more precise tools used by the natural sciences.

In 1931, the first edition of *How to Interview* was published. It was a most significant contribution to the development of better techniques of interviewing. It

brought together clearly and concisely practically all of the available information on this most important subject, including the experience of many who had engaged in extensive use of the interview for various purposes. And now we have a second edition, the revisions having resulted mainly from interviews which the authors have had with the users of the first edition. The result has been another significant addition to the available literature on the subject.

One of the most valuable changes in the new edition is the amplification of the list of suggestions to interviewers which appears in the chapter, "Learning How to Interview." Here are presented seventy-five fundamental points which all interviewers should master; the first fifteen are applicable to practically all interviews, the

next thirty-eight relate to fact-finding interviews, and the remainder deal with the interview in education and guidance. Another important change is the addition of descriptions of the interview from the point of view of the applicant for employment and of the vocational counselling interview.

The excellent chapters on the interview in employment and in industrial relations required little revision. The same was true of those dealing with the interview in market research, journalism, and law. New material, however, has been added to the sections relating to the interview in social case work, in education, and in the mental clinic. Another important chapter presents the findings from a number of researches on the interview and related techniques. The text is concluded with a chapter which brings together a few general conclusions regarding the uses, techniques,

and dependability of the interview. There are two appendices; one reproduces "Aids to the Vocational Interview," a pamphlet published by the Psychological Corporation, and the other an outline prepared by the National Committee for Mental Hygiene for the psychiatric examination of a child. A carefully compiled bibliography and an index complete the book.

This volume should be part of the personal library of every interviewer and worker in the fields to which it is related. It summarizes for him the best, even if meagre, information available concerning the art which he practices. The personnel manager will find it especially helpful—practically every chapter is related to some phase of his work. This book will prove of interest also to the wide-awake operating executive who, after all, is the real personnel manager, and must use the interview daily as a working tool.

THE SELECTION OF COLOR WORKERS. By W. O'D. Pierce. New York: Pitman, 1934, 134 pp., \$2.00.

Many operations in the paint, dyestuffs, paper, and other industries require that the workers have a high degree of the ability to discriminate colors. And thus far no practical industrial substitute has been found for human judgment in this connection. This small book describes a series of experiments out of which were developed practical methods of measuring the ability to discriminate fine shades of color. The work was done under the auspices of the National Institute of Industrial Psychology in London.

The test as finally developed consists of three series of colored disks, one of red, one of yellow, and the third of blue. In each series the disks vary in saturation of color, and the person being tested is required to arrange the members of the series in their order of saturation, placing the lightest disk to the extreme right and the darkest to the extreme left. The test is inexpensive, reliable, valid, and easy to give.

The research did not stop at the development of a fine measure of color discrimination, but went on to demonstrate its practi-

cal usefulness in selecting workers for occupations requiring such discrimination.

SOCIAL SECURITY IN THE UNITED STATES, 1934. New York: American Association for Social Security, 1934, 193 pp., \$1.75.

This volume is a record of the Seventh National Conference on Social Security, held in April of this year. The many speeches reproduced here may be grouped under the following headings: problems of legislation, old age security and the depression, health insurance, and unemployment insurance. The book contains, in addition, a summary of old age security laws and an analysis of the cost of pensions.

BUILDING PERSONALITY. By A. Gordon Melvin. New York: John Day, 1934, 303, \$3.00.

This is not another book on how to improve one's personality, as the title will imply to many. It is more important than that. It is an attempt to realign psychology as the study of human personality.

THE TIDES OF LIFE. By N. G. Hoskins. New York: Norton, 1934, 352 pp., \$3.50.

So much attention has been given to the

"glands" by half-baked, sensational writers that it is a source of satisfaction to find a book on endocrinology that is patently sound and reliable, and at the same time good reading. Dr. Hoskins gives a clear picture of what is known about the thyroid, adrenal, pituitary and other glands and their influence on human activity.

DEVELOPMENTAL PSYCHOLOGY. By Florence L. Goodenough. New York: Century, 1934, 619, \$3.00.

Introductory books on psychology are generally organized on the basis of the various segments of mental life; such as, imagination, thinking, motivation. Dr. Goodenough achieves greater reality and unity by using the developmental approach, tracing the growth of the whole human being through childhood, adolescence, maturity, and old age. The book will be useful to those desiring a knowledge of the principles underlying human behavior.

ARBITRATION IN THE NEW INDUSTRIAL SOCIETY. By Frances Kellor. New York: McGraw-Hill, 1934, 256 pp., \$2.00.

"The central theme of the new design for an industrial society is a theory of partnership in which industry, labor, the government and the consumer become partners." The author analyzes the conflicting interests in industrial society and forces making for their integration, with special reference to the recovery act.

HYGIENE OF THE MIND. By Baron Ernst von Feuchtersleben. New York: Macmillan, 1933, 150 pp., \$1.25.

This is a translation of an essay written by an eminent Austrian doctor in 1838. Compounded of ideas which in one guise or another have filtered down to us in certain phases of the writings of the Christian

Scientists, the Emmanuel Movement and more recent psychiatric studies, it is an interesting evidence that mental hygiene is no new thing. Rather as the translator says, "it has come to be essentially a wisdom of the ages." The scholar who would keep his humility, the layman who believes that mental and nervous ills are a new thing in the world,—each will find a more than antiquarian interest in this book. It will be fortunate if many of our contemporary mental hygiene texts stand up so well for reading a century hence!

A REFERENCE GUIDE TO THE STUDY OF PUBLIC OPINION. By Harwood L. Childs, Princeton University Press, Princeton, N. J., 1934, 105 pp.

The body of information relating to the approach to and the techniques of influencing public opinion has now reached such proportions, says Edward L. Bernays in his Introduction to this highly useful work, "that it seems desirable to attempt a tentative classification of it." Professor Childs has performed this task with great astuteness and breadth of vision. It is hard to believe that what is essentially a bibliography could be organized and correlated so that the major trends of the idea-content of the subject can be clearly read between the lines by the informed reader. The ordering of the material is highly suggestive. Its scope is excellent. It is to be hoped that the compiler will presently translate this outline of study into a finished treatise on a subject of growing import and practical values. Its possible application, for example, to the problem of bringing the results of the social sciences into closer interrelation with going affairs, is one on which we are all still novices. And this author should be able to offer us important aid toward its solution.

New Books

AMERICA'S CAPACITY TO CONSUME. By Maurice Leven and others. Washington, D. C.: Brookings Institute, 283 pp., \$3.00.

CRYSTALLIZING PUBLIC OPINION. By Edward L. Bernays. New York: Liveright, 218 pp., \$2.50.

DISCUSSION METHODS FOR ADULT GROUPS.

- By Thomas Fansler. New York: American Association for Adult Education, 154 pp., \$1.50.
- EDUCATION AND SOCIAL PROGRESS. By Charles Hubbard Judd. New York: Harcourt, 297 pp., \$2.00.
- EXECUTIVE ABILITY: ITS DISCOVERY AND DEVELOPMENT. By Glen U. Cleeton and Charles W. Mason. Yellow Springs, Ohio: Antioch Press, 199 pp., \$2.00.
- FACTS AND THEORIES OF PSYCHOANALYSIS. By Ives Hendrick. New York: Knopf, 331 pp., \$3.00.
- FEDERAL AID FOR THE EQUALIZATION OF EDUCATIONAL OPPORTUNITY. By Helen Marie Muller. New York: H. W. Wilson, 121 pp., \$.90.
- KEEPING A SOUND MIND. By John J. B. Morgan. New York: Macmillan Company, \$2.00.
- MUST THE NATION PLAN? By Benson Young Landis. New York: Association Press, 231 pp., \$2.00.
- THE NEW FIELD OF PSYCHOLOGY. By Madison Bentley. New York: Appleton-Century, 455 pp., \$3.00.
- THE NEW UNEMPLOYMENT ACT POPULARLY EXPLAINED. By Ronald C. Davison. New York: Longmans, 32 pp., \$.36.
- PERSONAL DEVELOPMENT AND GUIDANCE IN COLLEGE AND SECONDARY SCHOOL. By Ruth May Strang. New York: Harper, 348 pp., \$4.00.
- A PROGRAM FOR UNEMPLOYMENT INSURANCE AND RELIEF IN THE UNITED STATES. By Alvin Harvey and others. Minneapolis: University of Minnesota Press, 209 pp., \$2.50.
- PSYCHOLOGICAL DIAGNOSIS IN SOCIAL ADJUSTMENT. By Percival Mallon Symonds. New York: American Book, 371 pp., \$3.00.
- PSYCHOLOGY FOR EXECUTIVES. By Elliott Dunlap Smith. New York: Harper, 327 pp., \$3.50.
- STATISTICAL METHODS. By Herbert Arkin and Raymond R. Colton. New York: Barnes and Nobel, 224 pp., \$1.25.
- WOMEN AND THEIR CAREERS. By Anne Hendry Morrison. New York: National Federation of Business and Professional Women's Clubs, 185 pp., \$.15.

Current Periodicals

PREPARED BY LINDA H. MORLEY, *Industrial Relations Counselors, Inc.*

COLLECTIVE BARGAINING

BAUDER, RUSSELL S. (University of Missouri). National collective bargaining in the foundry industry. *American Economic Review*, Sept., 1934, Vol. 24, p. 462-476.

The International Molders' Union achieved a national trade agreement in the stove industry in 1891 which is still operative. A similar agreement with the National Founders' Association was abrogated in five years. This diversity of development may be explained in terms of market expansion and technological change. The union equalized competitive costs in the relatively over-developed stove industry, thereby checking a tendency towards cut-throat competition and creating a partial equality of opportunity in the limited market. Rapid expansion of jobbing and machinery foundries made cost equalization unimportant and led employers to seek freedom from union control. Introduction of the molding machine and quantity production of interchangeable parts made possible a dilution of the labor supply and a consequent impairment of the union's job control. Technical difficulties delayed machine introduction in the stove industry until the stabilizing value of the agreement had been demonstrated and stove manufacturers chose the security of a union-enforced equality in preference to the competitive risks of operation with handymen and machines.

EMPLOYMENT EXCHANGES

Great Britain. Labour Ministry. Progress of placement work of British employment exchanges. *Monthly Labor Review*, Aug., 1934, Vol. 39, p. 311-314.

Summary of a chapter from the Great

Britain Ministry of Labour Report for 1933.

INDEX NUMBERS OF UNEMPLOYMENT

International Labour Office. National and international index numbers of the general level of unemployment. *International Labour Review*, Apr., 1934, Vol. 29, p. 557-571.

Contains a description of the methods of construction of the indexes. Figures are given for sixteen countries.

INDUSTRIAL RELATIONS

FRAILY, L. E. (Personnel Director, Ralston Purina Co.). Rebuilding an organization to meet post-depression conditions. *American Business*, July, 1934 (Abstract in *Management Review*, Aug., 1934, Vol. 23, p. 239-240), Vol. 4, p. 24-28.

Plan devised to meet present conditions.

LABOR COST

HAPGOOD, THOMAS L. (Industrial Engineer, Strathmore Paper Co.). Labor costs in advance by formula. *Factory Management and Maintenance*, Sept., 1934, Vol. 92, p. 391-392, Advertising Page, 64, 68.

Procedure: establish correct times on present product; determine relation between present and new products; derive and use formulas.

LABOR LEGISLATION

United States. Labor Statistics Bureau. Labor legislation enacted by Seventy-third Congress. *Monthly Labor Review*, Aug., 1934, Vol. 39, p. 348-372.

A summary of the more important bills. Includes the complete text of the Railway Labor Act and the Railway Pension Act.

LEISURE

Kellogg Company. Survey reveals how employees spend extra leisure time. *System and Business Management*, July, 1934 (Abstract in *Management Review*, Aug., 1934, Vol. 23, p. 245), Vol. 63, p. 335-337.

Returns from 113 men and women employed in the production department. Statistics are given for men and for women in the following activities: Reading, sports, housework, preparation of meals, working around the house, gardening.

NATIONAL INDUSTRIAL RECOVERY
ADMINISTRATION

BERGEN, H. B. (Director, Industrial Relations, Proctor and Gamble Co.). Personnel policies in the light of the new deal. *Personnel*, Aug., 1934, Vol. 11, p. 16-26.

An interpretation of 30 replies to the following questions:

1) In what respects has freedom of management action become limited in the field of management activity?

2) On what factors still under the control of management must progressive companies rely in order to offset these limitations?

3) What problems of policy and procedure are created by these changes?

Two main suggestions appear to run through the correspondence. The first is that there be developed better methods for explaining to the employees not only the reasons behind the personnel policies and practices of the company but also the actual methods and techniques of personnel management as well as the data supporting conclusions and decisions. The second suggestion is that the foremen and other supervisors must be better trained in the techniques of imparting to the employees these policies and methods and that these representatives of the management themselves acquire greater skill in personal leadership.

BOWDEN, WITT (United States Bureau of Labor Statistics). Employment, hours, earnings and production under the N.R.A. *Monthly Labor Review*, May, 1934, Vol. 38, p. 1013-1031.

Reductions in average working hours per week and increases in average hourly earnings are among the outstanding features of recent industrial trends. In manufacturing industries reporting to the Bureau of Labor Statistics, average hours per week were 15 per cent lower in March, 1934, than in July, 1933, and average hourly earnings were 26 per cent higher. The Bureau's index of employment was 13 per cent higher and its index of payrolls was 27 per cent higher in March, 1934, than in July, 1933, although the Federal Reserve Board's index of production was 12 per cent lower. These and related facts regarding the trends in manufacturing industries, in manufacturing and nonmanufacturing industries combined, and in certain separate industries, with particular reference to the period of code operation are discussed.

OCCUPATIONS

VITELES, MORRIS S., editor. Analysis of occupations; a symposium. *Occupations, the Vocational Guidance Magazine*, June, 1934, Vol. 12, p. 1-85.

Contents: Analysis of occupations: editorial foreword, by Morris S. Viteles, p. 5-8; Occupational studies, by Cleo Murtland, p. 9-14; Job analysis survey: its procedures and some of its results, by C. A. Koepke, p. 15-34; Time and motion study: Techniques and their application to vocational guidance, by Lillian M. Gilbreth, p. 35-39; Analysis of skill, by Mildred Fairchild, p. 40-46; Job psychograph in job analysis, by Jay L. Otis and Kingsley R. Smith, p. 47-56; Intelligence and occupational adjustment, by Douglas Fryer and E. J. Sparling, p. 57-63; Occupational analysis for vocational guidance: Methods used by the National Institute of Industrial Psychology, by M. Boole Stott and M. Birkinshaw, p. 64-68; Job analysis in industry, by Richard Stephen Uhrbrock, p. 69-74; Classifying occupations for instructional purposes, by W. W. Charters, p. 75-78; New Aspects of job analysis, by Franziska Baumgarten, p. 79-85.

SAFETY

LECROIX, R. (Director, Industrial Relations Service, Le Materiel Telephonique). Safety organization of the company Le Materiel Telephonique. *Industrial Safety Survey*, May-June, 1934, Vol. 10, p. 59-69.

A detailed description of the activities of this company broken down by type of activity and illustrated by statistics, forms, and pictures.

MYERS, CHARLES S. Human factor in accidents. *Human Factor*, July-August, 1934, Vol. 8, p. 266-280.

Dr. Myers discusses the underlying psychological and physiological causes of accidents in the factory and on the road. He outlines the psychologist's approach to the problem of accident reduction, and describes some of the methods hitherto followed, and the results obtained.

STRIKES

CROOK, WILFRID HARRIS (Bucknell University). Social security and the general strike. *Political Science Quarterly*, Sept., 1934, Vol. 49, p. 411-420.

A general article examining the evidence of recent strikes all over the world in the light of present conditions.

TESTS

MILES, G. H., AND D. F. VINCENT. Institute's tests for motor drivers. *Human Factor*, July-Aug., 1934, Vol. 8, p. 245-257.

The Institute's motor driving tests are described in detail. The tests measure both actual and potential driving ability, and include measurements of reaction time, resistance to distraction, vigilance, visual acuity, visual co-ordination, and judgment of size, speed and spatial relationships.

TRAINING EXECUTIVES

MOONEY, PAUL (Director of Personnel, Kroger Grocery & Baking Co.). Training chain store executives. *Personnel*, Aug., 1934, Vol. 11, p. 26-32.

The results of the carefully worked out program of the Kroger Grocery and Bak-

ing Co. explained in some detail. The underlying principles are stressed so that the application of the system to other companies would be simplified.

UNEMPLOYMENT INSURANCE

FITZHUGH, GILBERT. Unemployment reserves (discussion). *Transactions, Actuarial Society of America*, May, 1934, Vol. 35, p. 72-102.

The original paper appeared in the May, 1933, issue. This discussion is by eight actuaries.

United States. Labor Statistics Bureau. Operation of unemployment insurance systems in the United States and in foreign countries, 1931 to 1934. *Monthly Labor Review*, Aug., 1934, Vol. 39, p. 273-307.

Eight foreign countries are covered in this study. Shows the manner in which the systems have been operated since 1931 as well as changes which have been made in the plans as a result of the long-continued depression.

UNEMPLOYMENT RELIEF

LESTER, RICHARD A. (Princeton University). Emergency employment in theory and practice. *Journal of Political Economy*, Aug., 1934, Vol. 42, p. 466-491.

Well documented article examining the possibility of putting unemployed workers to work on non-competitive yet socially desirable made-work projects at wage rates which will have no effect upon the rates paid for normal commercial or public work. Both American and foreign experience is summarized.

WORKMEN'S COMPENSATION

Chamber of Commerce of the United States, Insurance Department. Tendencies in workmen's compensation. *Insurance Bulletin*, June 30, 1934, No. 43, p. 1-15.

Includes a ten-page tabular analysis of compensation provisions, showing for each state the following information: date; death, permanent total disability, and temporary total disability benefits; waiting period; amount of medical aid; occupational diseases; date of law.

Collective Bargaining in 1934

BY EDWARD S. COWDRICK, *New York*

Mr. Cowdrick presents a brilliant summary of the complex and rapid developments in collective bargaining during the past year

PERSONNEL administration in 1934 was monopolized largely by problems of collective bargaining. Other subjects, with the single exception of social legislation, were pushed temporarily into the background. The end of the year found collective bargaining problems even more involved and perplexing than they were when the famous Section 7 (a) was written into the National Industrial Recovery Act, although there were indications of early clarification of at least some of the doubtful points through expected court decisions in the Weirton case, the Houde case and the suits brought by the Goodrich and Firestone companies to block elections ordered by the National Labor Relations Board.

Section 7 (a), as everyone has been reminded many times in the past year and a half, reads as follows:

Every code of fair competition, agreement, and license approved, prescribed, or issued under this title shall contain the following conditions: (1) That employees shall have the right to organize and bargain collectively through representatives of their own choosing, and shall be free from the interference, restraint, or coercion of employers of labor, or their agents, in the designation of such representatives or in self-organization or in other concerted activities for the purpose of collective bargaining or other mutual aid or protection;

(2) that no employee and no one seeking employment shall be required as a condition of employment to join any company union or to refrain from joining, organizing, or assisting a labor organization of his own choosing; and (3) that employers shall comply with the maximum hours of labor, minimum rates of pay, and other conditions of employment, approved or prescribed by the President.

It will be noted that in respect to labor the statute does these things:

1. It sanctions collective bargaining, without defining the term or setting forth the rights and obligations of the bargaining parties.

2. It imposes restraints upon employers, with no corresponding prohibitions directed at employees or labor unions.

3. It forbids forced membership in a "company union"—again no definition—without expressly including a similar restraint in respect to other labor organizations.

Whatever Section 7 (a) does or does not mean, it is certain that it was enacted at the demand of labor, and that at least in its early stages it was taken by the unions as a license for unrestrained organization. A drive for membership was started at once and has been prosecuted energetically throughout the intervening period.

This campaign for unionism was

matched by a marked spread of employee representation. Representation plans were adopted in numerous companies after the passage of the Recovery Act; in others existing plans were extended, sometimes with alterations intended to bring them more fully into harmony with the law.

A CONFLICT OF PHILOSOPHIES

This parallel growth of unionism and employee representation brought into sharp conflict different schools of thought on the whole subject of collective bargaining. In the minds of unionists and their sympathizers, Section 7 (a) contemplated union recognition in the orthodox sense of the term, with contracts between employers and organizations of employees. Many employers, on the other hand, were convinced that contracts were not necessary; that employee representation fulfilled the requirements of the law as adequately as did unionism, and that collective bargaining meant simply the joint discussion of mutual problems. These employers contended that management was meeting its obligations under the law if it expressed, and carried out in good faith, willingness to meet with any representatives chosen by all or a portion of the working force and to talk over and try to settle any questions these representatives wished to bring up.

This fundamental conflict over the meaning of collective bargaining received further confusion rather than clarification from various official interpretations that were given in the earlier stages of NRA. Statements by General Hugh S. Johnson and by Donald R. Richberg at first appeared

to support the contention of the open shop employers. This side of the controversy received further encouragement in President Roosevelt's settlement of a threatened automobile strike in March 1934, in connection with which he indicated a definite preference for proportional representation. In his statement at that time the President said: "If there be more than one group each bargaining committee shall have total membership pro rata to the number of men each member represents," and added: "It is my hope that this system may develop into a kind of works council in industry in which all groups of employees, whatever may be their choice of organization or form of representation, may participate in joint conferences with their employers." Later official pronouncements, however, cast doubt upon these early intentions and left the whole question in the utmost confusion.

In the meantime Senator Robert F. Wagner in the Congressional session of 1934 introduced his Labor Disputes Act in an effort to clear up controversial issues in the manner desired by the labor unions. This bill was defeated, but in the closing days of the session Congress enacted Resolution No. 44, under which the President appointed the National Labor Relations Board. About the same time Congress passed a revised Railway Labor Act in which were incorporated several of the features of the Wagner Bill.

COÖPERATION VS. CONFLICT

To those who had watched the gradual growth of confidence and un-

derstanding between employees and management during the years which marked the development of modern industrial relations, one of the most discouraging elements in the whole situation was the disposition of union leaders and their Congressional supporters to look upon precisely this coöperation and understanding as an evidence of something sinister and open to suspicion.

The original Wagner Bill in its list of "unfair labor practices," sought to interdict many established customs which had been looked upon as innocent or even praiseworthy. The author or authors of the bill apparently held the belief that the normal relationship between workers and management was one of conflict, and that the thing the Government had to do was to set down rules that would assure a fair fight. Scant recognition was given to the fact—so familiar to those experienced in industry that it has become a commonplace—that employers and employees normally spend little of their time fighting each other, and that their interests are more often common than antagonistic.

In this atmosphere of suspicion employee representation was under a severe handicap. Many of the older plans did not set up actual organizations of employees—the purpose had been to avoid building "company unions"—and were, in fact, voting franchises rather than associations. It was difficult even to discuss these plans in language intelligible to the Washington theorists. Employee representatives who appeared at the hearings on the Wagner bill often were perplexed by questions such as: "How many em-

ployees are there in your association?", or, "How often does the company union meet?"

Particularly was criticism levelled against any participation or coöperation of management in the collective bargaining activities of employees. Attacks were made upon the good faith of those representation plans—including some of the most successful of all—in which all matters were taken up in joint conferences without formal consideration by employees or their representatives in separate meetings.

In spite of these handicaps, supporters of employee representation, both workers and managers, made a sturdy defense and up to the end of 1934 they were holding their ground with fair success against those who were demanding that the Government "outlaw the company union."

While Congress, the Government and the National Recovery Administration were thus wrestling with the problems of collective bargaining, various labor boards and commissions had been busy with hearings and decisions on specific cases. In the absence of controlling court decisions the rulings of these boards form the most authoritative body of opinion as to the intent of Congress in passing Section 7 (a).

When the present National Labor Relations Board succeeded the old (Wagner) National Labor Board, it found itself at the top of a hierarchy of boards and commissions, some regional and some functioning for particular industries, some appointed directly by the Government and some set up under code authorities. Already there were many precedents, some of them conflicting, and a huge

and uncoded mass of quasi-judicial opinion on all sorts of labor questions.

FOUR LEADING ISSUES

The principal issues in controversy when the National Labor Relations Board took up its duties concerned the following aspects of labor relations:

1. Major rule. Does the vote of a majority of the employees in a company or plant bind the minority, or is the employer under obligations to deal with all representatives or even with individual employees?

2. Definition of collective bargaining. Must the employer sign contracts with employee organizations or has he fulfilled his obligation merely by meeting representatives and discussing and trying to settle questions which they bring up?

3. The closed shop. Is it legal under Section 7 (a)?

4. Management's support of employee organizations. Does this co-operation invalidate the power of an employee association to function freely in collective bargaining?

Doubts regarding the majority rule and the essential characteristics of collective bargaining were resolved, so far as the National Labor Relations Board was concerned, in the decision on the Houde Engineering Corporation case. Under the direction of the old National Labor Board, Houde employees had voted at a special election to select an agency for collective bargaining. The majority vote favored a local union but there was a strong minority for an employees' association. The company, in accordance with the theory of collective bargaining held by

many employers, had taken the result of this election to mean that it had both the privilege and the obligation to deal separately with the representatives of the two groups. It went ahead on this basis, meeting both sets of representatives and conferring on questions as they arose. The union, however, claimed that as representative of the majority it was entitled to be the sole collective bargaining agency for all employees.

This contention was upheld by the National Labor Relations Board in a decision in which it asserted that the company's policy of dealing with the two groups "resulted, whether intentionally or not, in defeating the objects of the statute." The board went on record with elaborate arguments, backed up by many legal citations, against the contention that the right of employees to "bargain collectively through representatives of their own choosing," meant that minorities were entitled to separate representation if they wanted it. This decision was at once recognized as contrary to many previous official pronouncements, including President Roosevelt's "proportional representation" statement in the settlement of the threatened automobile strike.

The majority rule doctrine of the Houde decision took on additional importance from the fact that it was coupled with an interpretation of collective bargaining which differed widely from that which had been advanced by many open shop employers. The board held that collective bargaining "is simply a means to an end. The end is an agreement," and ruled

that the employer must "enter into negotiations with the union and endeavor in good faith to arrive at a collective agreement covering terms of employment of all employees within the class which was permitted to vote at the election."

It is significant that the two principles, majority rule and the obligation to try to reach binding contracts with representatives of employees, were embodied in the Wagner bill which failed of passage in the last Congress. Together they embodied what many lawyers maintain is a drastic addition to Section 7 (a). If the Houde decision is sustained by the courts in litigation now pending it will make a sweeping victory for orthodox unionism.

Naturally the full utilization of this victory is dependent upon securing the support of majorities of employee voters. In a respectable number of elections, most notably the one held at the plant of the Kohler Company, independent organizations have polled larger votes than were cast for the regular labor unions. The unions, however, prefer to take their chances under the majority rule rather than to become involved in anything resembling proportional representation. In taking this attitude, they rely partly upon the persuasive powers of union agents and union members, and partly upon the expectation that the results of an unfavorable election can be reversed in a later poll. Besides, the unions are traditionally opposed to dividing the field with actual or prospective rivals. The majority rule, while it does not, as some employers believe,

necessarily involve the closed shop, unquestionably is a step in the direction of enforced conformity in all matters of collective bargaining.

WHAT UNIT FOR BARGAINING?

In the Houde case the National Labor Relations Board did not pass upon the question of what employees should comprise a unit for collective bargaining; that is, whether all the employees of a plant were bound by the vote of a majority or whether certain departments or certain trades could demand separate representation. In several addresses after the Houde decision was rendered, in which he endeavored to reconcile that decision with previous statements that had been interpreted as upholding the rights of minorities to separate representation, Donald Richberg appeared to advance the view that the rule of the majority was binding only upon minorities that had participated in an election; that an independent group, if it wished to do so, could remain out of the general poll and choose its own representatives by vote of a majority of its own members. In a later decision, however, in the case of the Columbian Steel Tank Company, the National Labor Relations Board held that members of an employees' association were bound by a majority vote of all employees, even though the association had served notice in advance that it would not participate in the election.

The end of 1934 found the utmost confusion still prevailing over the combined issues of majority rule and the obligation of employers to make contracts with representatives of em-

ployees. Clarification by the courts, or further legislation by Congress, apparently will be necessary before workers or management know just what is the law on these vital questions.

As to the closed shop, few rulings have been handed down and the whole situation is nebulous. General Johnson in a Labor Day speech in 1933 said:

If the employer should make a contract with a particular organization to employ only members of that organization, especially if that organization did not have 100 percent membership among his employees, that would in effect be a contract to interfere with his workers' freedom of choice of their representatives or with their right to bargain individually and would amount to employer coercion on these matters, which is contrary to the law.

The Government's attorney in the federal court case involving the Weirton Steel Company said: "The closed shop is impossible under 7 (a)."

The National Labor Relations Board, so far as this writer is aware, has not yet met the closed shop question squarely in a decision having general application and based upon the rights of employees under Section 7 (a). In one of its earlier decisions it held that a closed shop contract between a company and an employees' association was illegal, but stated that "the facts of this case do not require us to determine, in the light of Section 7 (a) of the National Industrial Recovery Act, the validity of a closed shop agreement with a bona fide labor union resulting in the discharge of employees not joining the union." In considering closed shop contracts with regular labor unions, the Board has sometimes approved and sometimes disapproved,

depending upon the facts in each case. Probably the closest approach to a general approval of closed shop contracts is contained in the decision on the Bennett Shoe Company case (December 10), but even here the Board based its reasoning partly on the particular facts involved.

CONTROVERSY OVER EMPLOYERS' SUPPORT

Employers' support of representation plans and of employees associations is another subject about which controversy has centered. Before the passage of the National Industrial Recovery Act it was generally taken for granted that the incidental expenses of operating a representation plan were to be borne by the company. Probably few, if any, employers would have objected to employees assuming some or all of this expense if they wanted to, but it simply didn't work out that way. Similarly, management assumed a greater or less degree of responsibility for preparing the terms of representation plans and for supervising their administration.

When questions arose as to the adequacy of employee representation to fulfill the collective bargaining requirements of Section 7 (a), these customary procedures immediately were attacked. Labor unionists and their supporters maintained that employee representatives in a works council could not serve as independent bargaining agents of the workers, so long as they met jointly with management representatives and received wage reimbursement for time occupied in their representative duties. It was further asserted that free choice of representa-

tives by employees was impossible when elections were held on company time and supervised jointly by workers and officials. Here again employee representation suffered from a misunderstanding of its methods and purposes, and from the attempt to force it into too close an analogy with trade unionism. Critics found it convenient to ignore tangible evidence showing that in many companies employees for years had been selecting their representatives freely, and that the representatives had fulfilled their duties with complete independence.

On this issue the National Labor Relations Board has upheld most of the contentions of the union camp. In a number of decisions it has sharply criticized employers, not only for exerting undue influence to induce employees to favor local organizations in preference to trade unions, but also for furnishing moral encouragement and financial support to organizations of employees.

WHAT ARE PRESENT TRENDS?

In the confusion of decisions and official statements, it is difficult to detect the real attitude of the Government toward collective bargaining or to trace tendencies with any degree of certainty. It is known that some highly placed officials believe the complete organization of industrial workers would be a good thing for the country.

So far as concerns the National Labor Relations Board, its decisions are clear and intelligible and prepared with the evident intention of building up a dependable body of precedent. The same thing cannot always be said

for the statements of officials in the higher and lower governmental ranks. Moreover, the various regional and industrial labor boards have been turning out decisions in large numbers, sometimes with little regard to precedent or consistency. So far as this writer is able to learn, no compilation of these decisions of subordinate boards is anywhere in existence. The making of such a compilation and its analysis for the discovery of a developing governmental labor philosophy would be a fruitful project for research.

Even with the present incompleteness and sometimes inconsistency of authoritative rulings, some rather definite tendencies may be noted:

1. There has been an inclination toward acceptance of trade union doctrines as to collective bargaining. This inclination is manifested in the decisions of the National Labor Relations Board, some of which have been discussed in earlier sections of this article. In all fairness it should be added that the National Labor Relations Board and the various subordinate bodies were given the duty of enforcing a statutory provision, Section 7 (a), which was intended by Congress as a concession to organized labor. If, as sometimes has been charged, boards have gone beyond the intent of Congress and have written into their decisions ideas which cannot be justified by the statute, the remedy seems to lie with the courts.

2. Some of the subordinate boards, and recently the National Labor Relations Board, have shown a disposition to assume responsibility over matters, even of a minor nature, that were formerly considered to lie in the field

of routine shop management. Questions of seniority rights, of discharge, layoff and rehiring, and of the assignment of individual workers to particular jobs have been subjects of complaint and adjudication. This tendency, should it become universal and be carried to extremes, might lead to something resembling governmental control of plant management.

3. In some industries labor boards have interfered in the internal affairs of representation plans or employees' associations, by taking control of the machinery for electing representatives. This tendency has not yet gone far enough to permit an appraisal of its ultimate results. It might assume much significance, especially if governmental boards should undertake to dictate the rules of both works councils and trade unions.

4. There has been some evidence of concern over coercion and intimidation by unions. In this connection it should be remembered that this type of coercion is not prohibited by anything in the National Industrial Recovery Act. Union sympathizers have justified this apparent discrimination by pointing out that if union agents resort to objectionable practices they can be punished under the criminal statutes or the police regulations of the states or localities in which the acts were committed. A suspicion that Section 7 (a) was somewhat one-sided in its application appears to have entered the mind of the President when in his statement regarding the settlement of the automobile strike he said: "The Government makes it clear that it favors no particular union or particular form of employee organiza-

tion or representation. The Government's only duty is to secure absolute and uninfluenced freedom of choice without coercion, restraint or intimidation from any source."

This pronouncement, coming while hearings on the Wagner Industrial Disputes Bill were in progress before the Senate Committee on Education and Labor, was seized upon by critics of the bill and for a time it was understood that Senator Wagner himself was willing to have the measure amended so as to prohibit intimidation or coercion either by employers or by union agents. When a revised bill made its appearance, however, all that was left of this proposed reciprocal prohibition was the following rather humorous provision:

It shall be an unfair labor practice:

(1) For an employer to attempt, by interference or coercion, to impair the exercise by employees of the right to form or join labor organizations, to designate representatives of their own choosing, and to engage in concerted activities for the purpose of collective bargaining or other mutual aid or protection;

(2) For employees to attempt, by interference or coercion, to impair the exercise by employers of the right to join or form employer organizations and to designate representatives of their own choosing for the purpose of collective bargaining.

It is perhaps significant that the National Labor Relations Board, acting in its mediatory capacity in the dispute between certain unions and the Great Atlantic and Pacific Tea Company, inserted in the stipulations of settlement the following sentence: "There must be no coercion or intimidation by any of the unions to compel any man to join a union."

POLICIES OF EMPLOYERS

We have dealt thus far mainly with what might be described as the external problems of collective bargaining—the clashes of interest between labor unions and their supporters on the one side and open shop employers on the other, and the pressure exerted to induce managers to adopt one or another type of labor administration. What, in the meantime, have been the developments within industrial organizations?

Here, again, there is little uniformity, although a few dominant tendencies may be traced. Naturally, employers have given more thought to labor policies in the last year and a half than in any equivalent period in the history of American industry. Any reckoning of the amount of time and energy spent upon these policies by officials of all grades—if such an account were obtainable—would be perfectly unbelievable to anyone not intimately acquainted with the internal processes of industry. Whatever doubt yet remained as to the importance of personnel administration in the managerial program has been brushed aside in the rapid march of recent events. It has become evident even to those who formerly doubted it that a defensible labor policy is essential to the successful management of any business organization, and that this policy needs to be understood and thoughtfully and intelligently carried out by everyone in the official ranks.

Thus we get back to an old principle of industrial relations—the importance of foremanship. Foreman

training, with particular emphasis upon the handling of labor, has been given renewed attention during 1934. Employers have been reminded afresh—some of them through costly and humiliating experiences—that the best planned and best intentioned labor policy may be nullified by the unfairness or stupidity or ignorance of a single supervisor who does or says the wrong thing in a crisis. To avert blunders of this kind, many companies have taken extraordinary pains in making sure that the policies of management were thoroughly explained up and down the line and in instructing officials of all ranks in the attitudes they should take toward demands of employees.

But it is not sufficient that company labor policies should be supported by the bosses. They need the coöperation also of the workers. The guarantees written into the National Industrial Recovery Act practically put industrial relations programs at the mercy of the employees for whose benefit they are supposed to have been designed. No labor policy—and particularly no method of collective bargaining—is good enough to survive unless it can gain and hold the support of the workers. Here the companies which have built up long experience of fair dealing and mutual confidence are at a distinct advantage.

As to specific methods of collective bargaining, various policies have been followed. Some employers, voluntarily or of necessity, have accepted the full union program, recognized outside organizations, and signed contracts covering wages and working conditions. (In our pre-occupation with

clashes of interest between unions and open shop employers, we should not forget that many companies have long been operating under union conditions with mutual satisfaction.) Other employers have adopted or strengthened representation plans or coöperated with their employees in doing so.

GAINS FOR REPRESENTATION

In the field of employee representation 1934 was distinctly a successful year in spite of persistent attacks. It is noteworthy in this connection that some of the representation plans which are now operating most successfully and which have enlisted the most loyal support of employees are among those adopted recently and, as it seemed, hastily. The success of some of these plans has surprised even the friends of employee representation, to say nothing of those critics who sneered at them as last-minute devices to escape unionism.

In some companies representation plans have been modified as to their terms or their methods of administration in efforts to bring them more completely into harmony with what were believed to be the requirements of the Recovery Act. Sometimes eligibility limits for serving as representative have been eliminated so as to permit employees, if they wished to do so, to vote for union agents or other outsiders. Sometimes citizenship or service requirements for voting have been removed. In numerous companies the management of elections has been made solely a responsibility of employees. In a few instances workers have been given the privilege to amend, without the consent of man-

agement, provisions which concerned election of representatives and other matters relating to self-organization.

As to whether or not these modifications in representation plans were necessary, there is room for difference of opinion. There are yet those who believe that a plan of the older type fully meets the requirements of Section 7 (a) so long as the employees themselves do not ask for some other method of collective bargaining. There is no doubt, however, that in many companies changes such as those described have been found expedient. In this connection it is worthy of note that some groups of employees, when alterations supposed to liberalize the collective bargaining machinery were suggested to them, either have refused to make them or have done so reluctantly and only to please the management.

Naturally almost all enlightened employers have taken added precautions to avoid even the appearance of influencing employees in their choice of representatives or of dominating the collective bargaining machinery.

All these developments have brought industrial relations departments sharply into the spotlight. The need for capable and intelligent personnel administration has been emphasized as never before. The increased responsibility of ranking executives and line officials has taken away no part of the burden carried by the professional personnel administrator. His duties have been increased, his responsibilities are heavier and the consequences of mistakes are more serious.

Frequently in recent months the statement has been made that nothing

in Government or in industry is static; that all our institutions have moved away from the moorings of past years and that change will be a continuous program in the future. However accurate these statements may be—and certain allowances probably should be made for short-sightedness and lack of historical perspective—there is no doubt that many

elements of our social and economic institutions are still in process of formation. Final results are obscure. There is little comfort for the man whose habits of thought are too rigid. Success in industrial administration depends as it never did before upon open-mindedness and the ability to make adaptations to changing circumstances.

Industrial Relations Activities Survive a Critical Test

BY H. F. BROWN, *National Industrial Conference Board, Inc.*

How well have pension plans, medical services, suggestion systems, training programs, and other activities survived the depression?

What are the costs of various personnel practices?

What has been the relative growth of employee representation plans and labor union agreements since NRA?

Mr. Brown answers these and other questions on the basis of a careful survey of the facts.

THERE have been two leading theories of the place of industrial relations activities in the scheme of management. According to one of the theories, these activities represent a parasitic growth on the system of labor relations, and owe their existence either to a misplaced paternalistic idea of philanthropy, or to a studied policy of trying to hood-wink employees and wean them away from ideas of class consciousness and class struggle, or to both. With such a basis, these activities would obviously be a product of prosperous and high profit periods, and would pass out of the picture when hard times removed the temptation to be unnecessarily generous at the company's expense, or to maintain unessential techniques for hiring, training, and adjusting employees to jobs.

Believers in the other theory contended that industrial relations policy, as developed during the last decade, was far more than a sop thrown to labor; that the various activities introduced for the purpose of develop-

ing coöperation between management and working force served the interests of both parties and so were sound and equitable, and that activities providing individual financial benefits represented well merited rewards for accomplishment and service. If this theory were correct, those activities must be a definite and integral part of management policy, and should be affected by a business depression only to the extent that other features of operating policy were affected.

A more searching test of industrial relations activities than the business depression which began in 1929 could hardly be contrived. A prolonged recession in business activity, covering not months but years, and the necessity to curtail drastically all operating expenses, provided ample justification for discarding any features of industrial policy that had not fully proved themselves. If industrial relations activities succumbed at such a time, they would not be discredited, but they might be criticized as prosperity

extravagancies. If they survived such a protracted period of deflation, even though curtailed in some respects, the claim that they were an important and established part of operating policy would be well substantiated.

Opinions are likely to differ with regard to what stage in the depression we have now reached, but there can hardly be any question that we have been through sufficiently trying times to permit an appraisal of the staying qualities of industrial relations activities. Accordingly, with the horizon somewhat brighter and industry hopeful that the worst was over, the National Industrial Conference Board set out to survey the results of the storm, to find what was to be learned from the experience of the last several years.

Such an investigation might be approached from either of two angles. The attempt might be made to select as a sample a thoroughly representative cross-section of American industry with proper regard for size of establishments, their location, and their distribution between industries, but without regard to their previous experience in administering industrial relations activities. Or it might be felt that the only true test of these activities could occur in companies that had seriously developed a program of such activities before the depression and had had an opportunity to judge their value before financial retrenchment challenged them to justify their worth. The Conference Board believed that the latter group of companies could contribute the more valuable information, and that their experience would offer a truer line on what past experience re-

vealed with regard to future probabilities in this field than could companies selected at random. From its records, therefore, it selected a list of companies which before the depression had well developed industrial relations programs and asked their coöperation in answering the question what the effect of the depression had been on industrial relations activities. Through the courtesy of 233 companies, significant information was obtained.

HOW PERSONNEL ACTIVITIES FARED IN THE DEPRESSION

One of the most informative features of the inquiry was a listing of over a hundred activities which involved employer-employee relations, with the request that companies indicate in appropriate columns those activities which are now maintained, those which had been discontinued as a result of the depression, those dropped on account of the N.R.A., those adopted since the National Industrial Recovery Act, and those that they were considering adopting. Such information would indicate not only what activities were most widely maintained by industrial companies, but also how the various activities had stood up under the impact of the depression.

The picture presented by the results of the survey is one of remarkable vitality on the part of industrial relations activities.¹ Particularly noteworthy is the strength displayed by those which involve no inconsiderable expense. For example, 41 companies

¹For full results of survey see National Industrial Conference Board, "Effect of the Depression on Industrial Relations Programs," 1934.

had formal pension plans and only 3 had been dropped during the depression, while one such plan had been adopted since the N.I.R.A., and 8 companies were considering adoption of pension plans. Informal pension plans were in force in 77 companies, and only 4 such plans had been dropped during the depression. Group life insurance was carried on by 162 companies, 2 had dropped it during the depression, 5 had taken out such policies since the N.I.R.A., and 3 others were considering such action. Only one of 134 mutual benefit associations had been discontinued during the depression.

Some activities, on the other hand, had suffered rather heavily. Employee stock purchase plans were in effect in 24 companies, as compared with 25 in which they had been discontinued. Suggestion systems were still operative in 102 companies but had been discontinued in 22 concerns. Twenty-five companies had dropped their plant restaurants or cafeterias and 124 companies had retained them. Vacations with pay were still provided for wage earners by 37 companies but had been discontinued by 28.

Medical and accident prevention work had been well maintained. Educational and training activities had suffered surprisingly little when the large labor surplus and ready availability of most types of labor is considered. Recreational activities had quite naturally been somewhat curtailed. Employment procedure, tests, job analysis, time study, and other features of modern employment technique had been interfered with very little considering that they are still generally

regarded more as refinements than as essentials of plant policy.

Particular interest at this time attaches to the record of agencies for employer-employee negotiation. Individual dealings with employees were maintained by 101 companies. In 126 companies there were plans of employee representation, and 17 companies operated under agreements with organized labor unions. Of the employee representation plans, 43 were of the employee committee type, and nearly twice as many, 83, were joint committees, including representatives of employees and also of the management. Forty-two of the employee representation plans had been started since the N.I.R.A., and 9 of the union agreements. In 12 companies employee representation plans were under consideration, but no companies reported the expectation of entering into an agreement with a labor union.

COST OF PERSONNEL PROGRAMS

A subject on which information is frequently sought is the cost of maintaining industrial relations programs. Such information is difficult to secure because segregation of the exact amount of cost assignable to different activities is almost impossible, and many companies lump much of the cost of maintaining these activities under some general heading of administrative cost. However, a number of companies covered in the survey contributed more or less complete figures with regard to these costs during 1933. Because of the wide variation in the figures reported by different companies, the median rather than the arithmetic mean was used to denote

the average. Figures were reduced to a basis of cost per employee in order to make data from the various companies generally comparable, and companies were classified in three size groups: those with 1 to 750 employees, those with 751 to 2,000, and those with more than 2,000 employees.

The median total cost per employee of maintaining industrial relations programs during 1933 in 63 companies which provided such information was \$14.06. This median cost varied from \$26.66 in companies employing not over 750 persons to \$11.25 in companies with 751 to 2,000 employees, and was \$11.87 in the large companies. The lower cost per employee in the larger concerns is probably attributable to the greater number of employees among whom the more or less fixed factors in cost may be distributed.

These figures can not, of course, be regarded as comparable except in one sense. They represent the median cost of maintaining the personnel activities which were in force in the various companies and therefore constitute the cost per employee of whatever program was maintained. But the activities included in the various company programs may have varied considerably, and therefore these figures do not show the differing costs of maintaining similar activities.

A closer approach to comparative costs of identical activities is found in figures provided by some companies. The median cost per employee of maintaining medical service in 73 companies, for example, was \$2.70; for pensions in 51 companies was \$10.33; for group insurance in 69 companies, \$6.25; for profit sharing in 5 companies,

\$34.50. The spread between costs of these activities in the three size groups was relatively considerably less than in the case of total costs.

Another angle of the cost of personnel programs is its proportion of total payroll. In the 49 companies that furnished information of this character, the median per cent of payroll spent on industrial relations activities was 1.85 per cent. Corresponding figures for the three size groups of companies were 2.1 per cent in concerns employing 1 to 750 persons, 2.3 per cent in companies with 751 to 2,000 employees, and 1.4 per cent in those with more than 2,000 employees.

THE PLACE OF INDUSTRIAL RELATIONS

Conditions affecting the relationship of employee and employer have undergone considerable change during the past year and a half. Regulation of the employment relationship in private industry has been assumed by the federal government, and what was formerly a matter for decision by employer and employees is now subject to approval of government boards and other agencies. Unless voided by court decisions, legislation of 1933 and 1934 has created a new and fundamentally different situation in industrial relations. How will this affect the status and importance of personnel programs?

Executives in 56 per cent of the companies which coöperated in the survey believe that the National Industrial Recovery Act has had no effect on industrial relations; that they are neither more important nor less important than before the Act became effective. In 43 per cent of the

companies it is believed that industrial relations have become of greater importance since the Act, while one executive thinks that they have become less important. If this is representative of industrial opinion generally, it is widely recognized that industrial relations policy in the future calls for the best thought that can be applied to it.

The function of an industrial relations policy might be said to be to provide a medium for translating a management's philosophy of the rights and obligations of employer and employee into terms of actual plant relationships. Many plans have been worked out during the last few years to assure the employee easy access to a responsible representative of management, to assure healthful and sanitary working surroundings, to adjust wages and working hours in an equitable manner, to prevent favoritism and provide equal opportunity for all, and to provide such financial benefits as particular companies believe that they

can afford. These plans will undoubtedly be reëxamined by many companies with a view to their applicability to present conditions when so much depends on establishing beyond question the management's desire and intention to be absolutely fair with its employees.

However long and wordily the controversy may rage over the question whether the interests of employer and employee are basically identical or antithetical, the fact remains that the two must work together in a common enterprise in the success of which the fortunes of both are linked together. To make this joint association as free from friction and as mutually productive as possible in an economic world where change and unsettlement seem to be the rule, is the task which industrial relations policy must assume. The quality of its contribution is likely to be an important factor in industrial accomplishment during the next few years.

Practical Employee Ratings

BY GUY W. WADSWORTH, JR., *Los Angeles*

WELL this stuff on your rating scale, or whatever you call it, doesn't describe the things about Jones that are really important." Thus did one of our Superintendents dispose of our check-up on what appeared to be an inaccurate rating of one of his men. And he was right. Under the necessity of making some kind of appraisal of our employees, we had carefully experimented with a number of formal rating methods. Our experience, like that of so many companies, was disappointing. So we developed a new, less formal method which allowed, or more exactly, forced the supervisor to appraise his men in his own terms.

Before describing this method, let me take a few paragraphs to tell about our experience which led to its development. Our effort had been to secure ratings on workers in a utility corporation whose duties are such that there is no quantitative measure of production. They perform the work at hand, which varies widely from day to day, and are referred to as "service" workers for lack of a better descriptive term, and by way of contrast with "production" workers whose output is measurable.

The first type of rating device adopted was a graphic scale. Nine forms were used which individually

covered executive, sales, clerical, and various types of operating personnel. In addition each form provided for a man-to-man comparison of workers similarly engaged. For example, a given supervisor would be called upon to rate five machine bookkeepers. At the bottom of the scale for each of the five we would have the following clause: "If you were to list the 5 machine bookkeepers under your supervision in order of their general value to the Company, as what number would you list this employee? Number —."

Our purpose in adding the above comparison was to check the ranking in the numerical score, made in the various qualities covered in the scale, with the supervisor's estimate of comparative value. The man-to-man ranking of 433 employees, who were compared in 70 groups including from 3 to 7 employees each, agreed closely with ranking in the rating scores (correlation coefficient of .92). While the two methods of rating agreed with each other in 4 cases out of every 5, *many ratings did not match with actual promotions and discharges.*

Our second experiment was with a service report which has received wide attention in public personnel work. Here again we obtained high agreement between score rank and man-to-

man comparisons. However we continued to note inconsistencies between ratings and the proposals made with regard to the men rated.

In short, it was apparent in a substantial number of instances that ratings were at variance with the true views of the rater. We would not hold that the opinion of the supervisor is necessarily more just, factual or representative of an ideal appraisal than the showing of a well balanced rating device. We urge, however, that the way the supervisor feels toward a given employee is an important factor in the future of that employee. Moreover, it is idle for the Personnel Department to endeavor to sell the supervisor upon excellence which the supervisor himself does not or cannot recognize under working conditions.

Other weaknesses of formal rating devices appear to be:

- (1) Hard and fast weightings of given qualities, actions, or failure to act. They are not necessarily regarded as being of uniform importance in the scheme of things.
- (2) Similar numerical scores may be achieved by various combinations of grades on unrelated qualities. The total or average making up the score is derived without benefit of a common denominator.
- (3) Combining the judgments of several raters may as easily result in averaging two inaccurate observations with one good one, as in achieving the contrary and more desirable result.

Our discussion may seem, on the

whole, biased against formal rating scales. Yet we continue to use them at regular intervals. Our reasons are:

(1) They provide periodic participation by the supervisors in the personnel program.

(2) Each item checked upon a rating scale presents an opportunity to run down facts.

(3) Rating scale returns offer comparison between supervisors who are "too easy" or "too harsh" in their judgments.

Briefly summarizing, our experience with formal rating scales indicated that one worker in 5 was over-rated or under-rated. Our conclusion was that to distinguish which employee was the "one in five" was a formidable undertaking.

Yet the matter of securing employee ratings could not be abandoned. Every firm of consequence has been faced with lay-offs during the past four years. The Personnel Department often-times must pass upon individual cases, and cannot afford to "rubber stamp" recommendations.

From this viewpoint we used interviews extensively to check formal ratings. This enabled us to develop a rating device which assists in obtaining definite information on the supervisor's point of view. It was devised following interviews with over 50 supervisors who had returned ratings, in an effort to secure the facts which prompted favorable and unfavorable reports. For example, a supervisor would check qualities associated with lack of co-operation in a given case. In the interview there would be factual discussion of the form and instances of lack of coöperation, whether it was difficult

to correct, and particularly what the employee had done, or failed to do, in comparison with other employees who were considered coöperative. In short, the supervisors were called upon to support their ratings in terms of specific happenings, so far as possible.

It frequently developed that the ratings were based upon impressions rather than facts. In many cases favorable or unfavorable impressions arose from the supervisor's belief in his ability to "take in a situation," sometimes with very little observation. This particular complex, in our opinion, is the most subjective factor in all rating procedure. From our experience in checking ratings, we would doubt the value of rating practice which does not include some such review. It weeds out impressions which cannot be supported by facts, and clarifies individual ratings. The time factor is important, but with some experience one man can review upward of 50 ratings in a working day.

In the process of checking our ratings the observations and suggestions of our supervisors were carefully recorded. They disliked standard phrases intended to be representative of merit, seemed to have in mind certain failings which made employees less valuable. At the conclusion of some 200 interviews, the frequencies of various types of comment were compared, and the type of questions which elicited the more significant responses was noted. From this point our interview was uniform, and the following questions were regularly used:

"1. What are the good points of — as you see them?"

Responses to this question were so

various as not to lend themselves to quantitative statement, but were highly indicative of employee standing. Examples: "Well, he can do anything in his line, and you don't have to watch him." "He's one of our best men." Given the opportunity to express himself in his own way, the supervisor will, often in the turn of a phrase, clearly indicate whether the employee is satisfactory or otherwise. None of the supervisors presented analyses in terms of "3 points out of a possible 5 for punctuality, 4 points for knowledge of work, etc." Neither was there evidence that any given virtue was considered of uniform importance. For example, one supervisor, apparently hard put to it to describe "good points" of a certain employee, said: "Well, he comes to work on time, if that means anything." A perfect score in "punctuality" in this case was meaningless. Again, the expression "he tries hard" was often faint praise rather than a good send-off on "application to work."

"2. Would you hire this employee over again if you were to make the decision? *Yes* — *No* — (check)

"If your answer is '*No*', please explain."¹

This question is a test of selection methods. Sometimes an affirmative response results when the supervisor himself selected the employee, but this is balanced by having other supervisors review the case. A negative response, followed by a request for an explanation, frequently provides a short-cut in

¹ Appropriate space was provided for explanations on the "Confidential Report" in which these questions were later used for securing written reports

determining what is regarded as the employee's most serious fault.

"3. Does this employee have to be corrected, or watched due to some special weakness? *Yes* — *No* — (check)

"If your answer is '*Yes*', please explain."

Here again the effort is to determine the supervisor's estimate of the importance of the employee's faults. Discipline contacts, such as the question would imply, are usually clearly remembered.

"4. Has this employee, to your knowledge, complained of any of the following? *Yes* — *No* — (check)

a. That he is 'picked on.'

b. That someone has it 'in for' him.

c. That he is not getting a fair deal.

"If your answer is '*Yes*', please explain, stating whether you think the complaint justified."

This question serves to identify the "abused" employee.

"5. Is this employee, in your opinion, too sure of himself, conceited, inclined to 'know it all,' or a person who 'can't be told anything'? *Yes* — *No* — (check)

"If your answer is '*Yes*', please explain, stating whether this interferes with the work."

In this case the supervisor may reveal not only important temperamental qualities of the employee, but his own as well. One supervisor answered "yes" on this question for two-thirds of his men, which proved highly significant in considering the supervisor himself.

"6. Is this employee at times quarrelsome? *Yes* — *No* — (check)

"If your answer is '*Yes*', please explain, stating whether you think this employee is likely to give or take offense easily, and with regard to what sort of thing."

Here an affirmative response provides a basis of investigation. The employee who "takes offense" easily, or "can't get along" is identified.

"7. Does this employee at times argue too much? *Yes* — *No* — (check)

"If your answer is '*Yes*' please explain, stating whether you think this employee argues because he (or she) is well informed, or just because he (or she) likes to argue."

This identifies the employee who argues to the point that he attracts attention. When combined with feelings of abuse (affirmative response on question No. 4) and conceit (affirmative response on question No. 5) the temperamental pattern is significant.

"8. Is this employee at times given to wasting time on the job, talking too much with others, or mixing into things that do not concern him? *Yes* — *No* — (check)

"If your answer is '*Yes*', please explain."

The implications of a "yes" response to this question require no comment.

"9. Can you count on this employee for all of the following? *Yes* — *No* — (check)

a. To keep his word.

b. To meet his obligations.

c. To keep his appointments.

d. To be considerate of other people.

"If your answer is 'No,' please explain the point upon which you cannot count on this employee."

The points covered in this question were among the more frequent causes of supervisor dissatisfaction. Employees who could not be counted upon in such particulars were seldom well thought of in other respects.

"10. Does this employee take good care of company property? *Yes* — *No* — (check)

"If your answer is 'No,' please explain (such points as losing tools, failing to take proper care of equipment, etc., should be covered.)"

In service lines, particularly, responsible care of tools and materials is important. Even workmanlike performance otherwise appears to be nullified when the employee occasions replacement expense.

"11. Does this employee do any of the following? *Yes* — *No* — (check)

a. Lose his temper easily.

b. Hold grudges.

"If your answer is 'Yes,' please explain."

This question identifies the "hot-head" or the sulker. Frequently such employees are among those who complicate supervision in that "you have to know how to take" them. Temperamentally, it is important to distinguish the employee who "blows up and gets over it" from the one who smolders inwardly and develops intense dislikes, when temper manifestations have created problems.

"12. Can you suggest any point on which this employee should improve in order to increase his value to the company? *Yes* — *No* — (check)

"If your answer is 'Yes,' please explain."

This question provides opportunity for constructive suggestion. A negative response represents a relatively fair statement of general standing.

"13. Has this employee any difficulty or fault not discussed which interferes with his work? *Yes* — *No* — (check)

"If your answer is 'Yes,' please explain."

This question affords opportunity for discussion of additional points which are regarded as important. Sometimes it happens that the preceding questions are interpreted as overly specific, so that some special point cannot be presented. It will be noted that this question, as well as question No. 12, is intended to prompt general discussion.

"14. Check below how you think this employee should be rated:

As *Outstanding* — (the best, or one of the best workers you have ever supervised (or known) in this line of work).

As *Satisfactory* — (a good average employee, well fitted for the work).

As a *Problem* — (of any kind, due to poor health, lack of ability or failure to use it, difficulty in getting along with other employees or the public, or any other cause).

This question provides a three-point general rating, which appears sufficiently objective for statistical purposes. It is our observation that a three point scale covering general standing imposes considerably less burden upon the supervisors than a greater number of points of rating

covering individual qualities. While the criteria are admittedly coarse, "Outstanding" ratings are suggestive of better than average placements; "Satisfactory" ratings reflect generally acceptable selection, and "Problem" ratings identify employees who should be studied with a view to bettering the adjustment, or failing that, appropriate changes in the work, or dismissal.

It is difficult to conceive that our interest should be greater in other points than these. Concerned with statistical justification of our work, we may be prone to seize upon alignments which result from quantitative scores, or fine cut distinctions resulting from multiple point ratings, even though we recognize inherent weakness in such practice. *Practically, we have found the management not so much concerned with coefficients of correlation as with ability to locate promising material, and to recognize problems.* Hence we feel that coarse measures or ratings on general standing can be accepted for practical purposes, without debate as to whether the outstanding employee is "superior" or "very superior;" whether the satisfactory employee is "average" or slightly "above" or "below average," and so on.

"15. The following — employees in your district are classified on the payroll the same as this employee:

(List of Employees)

"If you were to list these — employees in order of their general value to the Company, as what number would you list this employee? Number —."

This final question seeks a man-to-man comparison, which is readily

obtained from supervisors of small groups. When the group exceeds ten employees, this comparison is of less value. Particularly in ranking the "average" employees, supervisors are apt to include marginal notes to the effect that "John Doe and Richard Roe are really about the same," and so on.

The foregoing group of questions is presented without claim as to excellence of context, or as to the logic of the order in which the questions are listed. The most obvious criticism is that we appear to ignore qualities for which a measure is commonly sought in rating procedure, particularly those bearing on the work. Practically, in discussing "good points," "discipline contacts," "faults," etc., we obtain measures of praise and blame, or "satisfaction-annoyance" which almost inevitably are attended by discussion of ability at work. In the process we avoid forming conclusions regarding the supervisor's attitude which he himself would not recognize. Another consideration is that on points which are commonly considered important, the rater is called upon to give the employee a clean bill of health, or to justify a contrary report.

We have repeatedly stressed the importance of gaining the supervisor's actual views, which may suggest lack of concern in the validity of those views. Our viewpoint on this score is, first, that to deal intelligently with the supervisor's attitude, we must first be assured that we know what it is. Second, the personnel department must furnish the supervisor with men with whom he can work, and must sometimes make concessions to his foibles. If a department or section is

ably managed, the supervisor may be forgiven his inability to recognize the excellence of a given employee who rates A+ on standard qualities, but who none-the-less offends special prejudices of the supervisor. An important point in the validity of rating procedure is that it should provide an accurate indication of the adjustment to the given situation. Supervisor satisfaction or dissatisfaction assumes paramount importance. Where the supervisor carries his prejudices to unreasonable lengths there are usually obvious indications of unsuitability. So long as he is to be retained in charge, the personnel department is primarily concerned with placements which enable him to discharge his responsibilities effectively.

Subsequent to using our set of questions in oral interviews, they were tried in writing in the form of a "Confidential Report." With few exceptions, the information gained was as complete as, and in fair agreement with results obtained in the oral interview. It is to be remembered, however, that the same supervisors were involved, and that they had undergone the experi-

ence of being "pinned down" in the oral interviews.

Summarizing our experience with rating procedure, we would submit the following:

(1) Formal rating devices do not always reveal accurately the true attitude of the supervisor toward an employee. As a corollary, the chief fault of formal procedure appears to be in the assignment of hard and fast weightings to given qualities, irrespective of the supervisor's views as to the importance of such qualities in the scheme of things. Further, various patterns of merit and demerit may result in the same score, which confuse statistical interpretation.

(2) A fair estimate of the standing and acceptability of employees may be gained from an approach which permits the supervisor to express himself in his own words. This requires a process of educating the supervisor to support his position by facts so far as possible. Coarse measures of general standing and comparative value may be obtained for statistical purposes with little difficulty, and furnish acceptable criteria.

The Machine and Industrial Health

BY FREDERICK B. FLINN, *Delamar Institute of Public Health*

Dr. Flinn, outstanding authority on industrial diseases, shows how the introduction of machinery has had in many instances a beneficial effect on workers' health.

MACHINERY has been condemned as the curse of mankind, not only because it presumably steals jobs, but because it and its by-products are alleged to mangle arms, corrode lungs, poison, and otherwise undermine health. What are the facts? Let us look at the record—a record which is by no means complete, but one which shows that the introduction of machines has been far from an unmitigated evil from the viewpoint of workers' health.

The Machine Age has of course brought with it new hazards, but in many instances the introduction of machinery has increased safety and health. The glass industry is a case in point. This industry was once very unhealthy. Blowers, gatherers, mixers, cutters, polishers and pressers were refused insurance or had to pay such high premiums as to make it practically prohibitive. The tuberculosis rate in the period between 1914-1918 was 26.3 per cent of the mortality from all causes. The common blow pipe, the dust during the mixing process and loading of the pot furnace, the fine glass broken off at the mold, the putty powder used by the polisher of cut glass, all played their part in making the industry most unhealthy. The

intense heat to which workers were subjected predisposed them to pneumonia and other respiratory diseases. A change began taking place in about 1919. Shops were experimenting with automatic machines for blowing bottles and other products. These machines have almost entirely replaced the hand worker, and 99.8 per cent of all bottles are now machine made. Only special shapes and sizes are blown by hand. Hand blowing of window glass gave way to machine production at about the same time. The glass is drawn out in sheets from the furnace by a man sitting on a travelling crane. With the automatic machine came the abolition of the pot furnace and the installation of the tank furnace. The mixing is done in enclosed containers which are discharged directly into the furnace, eliminating the chance of lead intoxication from the dust. Cut glass is now polished by hydrofluoric acid and the putty powder containing 60 per cent of lead oxide is used only on rare occasions when the glass needs a little extra finishing. The insurance rates no longer discriminate against glass workers except in some special jobs. The old glass blowers have become, in many cases, mechanics whose duty is to tend the machine which

takes the glass from the furnace and delivers it on the travelling belt going to thelehr furnace for annealing. This is one industry where the machine has done much to improve the workers' health.

Lead has been for long one of the chief enemies of workers' health, in part because it is used in from one to two hundred industries. While lead is still a leading cause of poisoning and death, its disastrous effects have been curbed. The English records for the year 1900 show that 1058 cases of lead poisoning were reported, 56 of these ending fatally. By 1931 the number of cases had fallen to 104, and the deaths to 15.

The introduction of machinery has had a great deal to do with this improvement, as is shown by examination of individual industries. In the white lead industry, for instance, 183 were poisoned and 4 died during the period 1900 to 1904, but from 1925 to 1929 only 9 cases, one of them fatal, occurred. The improvement is the result of a machine which takes up the white lead pulp—a thickened suspension of lead carbonate in water—at one end, and mixes it with oil and delivers it at the other end as paint ready for market. Workmen have very little to do except to see that the machine is kept running. Diminished occurrence of lead poisoning in file cutting is due to the machinery which has replaced hand work. The automatic process in enclosed containers permits us to have ethyl gasoline without endangering the lives of the employees producing it. Spray painting of Pullman cars and automobiles has reduced the lead hazard in another industry which al-

ways furnished a large number of cases, for the cellulose paints do not contain lead and the repeated sandpapering where lead paint was used to produce a fine polish is done away with.

The improved conditions of the card room in the cotton industry again illustrate the beneficial effect of machines. Under the old conditions the stripping dust resulted in 73 per cent of the workers suffering asthma-like attacks. This work is now done by machine and the vacuum cleaning process greatly reduces the dust. Improved lung conditions and reduction of the long periods of incapacitation have resulted.

The evidence with regard to tuberculosis, the second highest cause of death to the working population, is complicated and baffling. What with improvements in sanitation, housing, and treatment, and changes in the general economic conditions of the people, it is impossible to calculate the extent to which the Machine Age is responsible for the white plague.

We do know, however, that tuberculosis has always been associated with industry, especially in those trades in which dust is present. It is estimated that there are 5,000,000 persons in the United States engaged in the dusty trades and of this number 10 to 15 per cent in trades in which free silica dust is present in amounts known to predispose to tuberculosis 75 per cent of the effected persons. It is up to the engineer to develop machines that will do the work without exposing the man to dangerous amounts of dust. A step has been made by the Kelley invention which was used in the construction work at Radio City. The

method is to remove the dust, by special suction device, at the point at which it is generated. Correct methods of ventilation made possible by mechanical developments will go a long way in eliminating the hazard of dusty work.

Poverty and its consequence, overcrowded housing, are more devastating causes of tuberculosis than are many of the industrial dusts. Studies made in Detroit and elsewhere show that the rate of tuberculosis bears a direct relation to the number of persons per room. The disease is spread by personal contact. That improved housing is not enough, however, is shown by results in Stockton-on-Tees, where a portion of the population was removed in 1917 from an unhealthy area to self-contained municipal housing units. The mortality and morbidity rates during the 5 succeeding years were higher than they were before removal. Investigation showed that the inhabitants had to economize on food in order to meet the increased rent. Tuberculosis is, the medical profession agrees, the poor man's disease.

And it is the machine which is our chief means of raising the economic level of the working population, and consequently improving the level of its health. A fair share of the in-

creased wealth occurring from increased production at lowered costs must go to those on the lower economic strata, if tuberculosis is to be successfully combatted.

The further development of automatic machinery will probably help also by relieving men of muscular strain, of chronic fatigue which predisposes to tuberculosis.

My purpose has not been to whitewash the Machine Age. Mechanization has brought new and vicious health hazards. But, as many have overlooked, the benefits, too, have been great, and the future possibilities are even greater. As we foresee developments in machinery we can anticipate the elimination of man as much as possible in the production of material involving hazardous exposure. Study of the correct type of ventilation to be installed at the point of generation of poisonous gases and harmful dusts will cut down the main causes of ill health among workers. It has been the premise of the industrial hygienist that if we can eliminate dust, fumes, and gases from the atmosphere of the shop, we shall come very near to the goal set by Sir Herbert Samuel, when he said, "there should be no such thing as industrial disease possible."

A Check-List For Managing a Major Industrial Change

BY ELLIOTT DUNLAP SMITH, *Yale University*

So important are the personnel aspects involved in the introduction of new machinery, labor saving methods, and other changes, that we reproduce this "check-list" from the author's newly revised "Psychology for Executives," published by Harper and Brothers. The list provides an excellent analysis for executives to check over before undertaking such changes.

IN SO complex a reconstruction as that involved in a drastic industrial change such as the introduction of a major technological change or the installation of a fundamentally new method of incentives or plan of organization, just to rely on practical experience and to do intuitively what the occasion demands is to court failure. Good management must also be systematic management. Besides, the personnel aspects of the change can never be handled as a thing apart. Unless the other aspects of the change are well handled, the personnel aspects cannot be, and unless the personnel aspects are well handled, they are likely to upset the entire development.

I. ANALYZE AND ORGANIZE THE FACTS RELATING TO THE PROPOSED CHANGE.

A. Find out just what the new proposal amounts to before you finally decide to make it.

1. Check carefully the experience of other plants in regard to it.
 - a. Get down to concrete conditions, methods, costs and

results, and the exact differences between conditions in your plant and those in the plant under observation, for the mere fact that a development proved valuable in some other plant is not in itself evidence that it will be valuable in yours.

- (1) Especially check "statements from satisfied users."
 - b. Look into its effects in the long run as well as its immediate savings.
2. Work out concretely from the points of view of finance, sales, merchandising, management, and employee conditions and relations, as well as from the technical and operating points of view, just what it will involve in your company to put through the change.
 - a. Give each of these aspects specialized attention.
 - b. Be sure before you start that you have funds and time enough to put through the change thoroughly.
 - (1) Particularly check the expenses and time that will be required for purposes other than layout,

equipment, and process, as the latter, while the most apparent, are likely to prove but a small part of the whole.

- B. Make a careful survey of your plant in all branches and functions in regard to existing conditions and their relation to the change.

1. In no other way can you know clearly just what must be changed and what the problems are which you will encounter.
 - a. Unless each branch and function of the concern, especially the personnel function, is investigated separately, important conditions are likely to be overlooked.

II. PLAN THE CHANGE BEFORE HANDLING IT.

- A. Carefully determine the exact procedures of the new process and the standards of materials, equipment, working conditions, etc., adequate to the new situation.

1. Do not accept standards from other places without first carefully testing them out in your own plant.
 - a. Even procedures and standards worked out by laboratory research require proving by actual factory trial.
2. Work out careful objective measurements and records by which the attainment and maintenance of those standards can be determined.
 - a. In regard to operating conditions, it is important to get as direct a measure as possible of the effect of conditions upon the amount of work the employee has to do.

- B. Carefully determine the other adjustments in conditions, practices and organization that will be necessary to bring all branches of the company into line with the change, checking through each branch and function separately.

1. Financial adjustments.
2. Sales and merchandising adjustments.
3. Management adjustments.
 - a. Establishment of the systematic techniques of measurement and control necessary to insure maintenance of the newer standards.
 - b. Changes in personnel.
 - c. Changes in organization.
 - d. Management education and training.
 - (1) Remember old executives will not adapt themselves readily to new ways.
4. Employee adjustment.
 - a. Hours and wages.
 - b. Living conditions.
 - c. Displacement and demotion of workers.
 - (1) What can be done to prevent this as far as possible?
 - (2) How select those who must be let go or demoted?
 - (3) What can be done to abate the hardships of this?
 - d. Expression of employee point of view.
 - (1) Providing adequate channels of communication.
 - (2) Giving the employees adequate time and information for—
 - (a) gradual and assimilated understanding and,

- (b) effective participation in determining the employee aspects of the change.

C. Plan out the actual procedure and timing of the change.

1. Plan to proceed slowly enough—usually taking one unit at a time—
 - a. to permit learning from experience how to adopt the procedure to local conditions before making final steps, and
 - b. to restrict the amount of change so that the entire plant is not in confusion at one time.
 - (1) To do this permits executives to concentrate attention on a small area until the new conditions have been brought under control there, *and*
 - (2) prevents any large number of employees from being changed over at any one time.
 - (a) It also provides time for gradual employee understanding and adjustment.

D. Plan the educational aspects of the change.

1. In regard to management, think out—
 - a. how and when management can best be brought to understand and really to want to make, not merely the technical change, but the management changes that relate to it; *and*
 - b. how and when they can be taught the new techniques and standards of management so these will become really effective.

- c. Realize that such re-education of management cannot be attained by proclamation.

- (1) It requires time for re-adjustment of biases and habits of thought.

- (2) New ways can only be learned, and in large measure can only be realistically understood, by actual experience and practice.

2. In regard to employees think out—

- a. how and when employees can best be brought to understand realistically the value and character of the change; *and*

- b. how and when they can best be taught their changed jobs without unnecessary difficulty or loss of earnings or prestige.

- c. Realize that this requires time, and requires time on the part of management as well as the employees.

E. Devise for the period of the change a form of organization that by the division of responsibility will insure—

1. that the long run point of view does not get lost sight of in the pressure of immediate exigencies of changing over; and
2. that the personnel problems do not get overshadowed by the technical and operating.
 - a. Especially provide channels which will enable the employees to get an effective understanding of the change and its effect on them, and of expressing their point of view in regard to it.

F. Plan before starting, how standard conditions and pro-

cedures will be maintained in the long run after the attention and interest of installation wears off.

III. CARRY THROUGH THE CHANGE.

A. Adhere to the general plan, but adapt it as conditions develop.

1. Pull together and consolidate one major aspect of the change before launching another.

B. Be sure conditions fully measure up to standard and can be kept there before making any change dependent upon those standards.

C. Check frequently the carrying out of the change in each function and branch, and the balance of progress in each.

1. It may be as unfortunate for a function to get out of line because it gets too far ahead as because it gets too far behind.

D. Don't hurry the change.

1. Delay is better than the confusion of putting the strain of

new methods on unprepared conditions.

2. The adjustment of employee or management understanding may take more time than you have planned, but it is worth delaying for.

IV. STABILIZE THE CHANGE.

A. Don't think the job is over merely because the new conditions have been established and are apparently going well.

1. The most dangerous stage comes after the interest and attention of newness wears off.

B. Check personally from time to time to be sure that the standards are being maintained; that the new management techniques are really working, not just being kept up; and that the related conditions, especially personnel conditions, have been kept up.

C. Establish systematic maintenance check-ups.

1. Separate them into functions so each aspect will get special attention.

Measuring Executive Ability

BY CHARLES W. MASON, *Carnegie Library of Pittsburgh*, AND
GLEN U. CLEETON, *Carnegie Institute of Technology*

Those concerned with locating potential executive material are reminded that "executive ability" is not a simple, single ability. The successful executive is better than average in a wide range of abilities and personality traits.

SEVERAL investigators have attempted to isolate and measure the fundamental traits of executive ability. Tests have been given with the apparent hope that some one outstanding trait or capacity would be discovered which could be measured and used as an index of executive aptitude. But tests of intelligence, imagination, social knowledge, judgment and many others, when applied to executive groups have failed to reveal any single trait or measurable capacity which above all others is indicative of executive ability. While the results of such investigations have discouraged the belief that executive aptitude is a unit trait, each investigator has felt that executives as a group differed from other groups in industry and business.

The usual conclusions arrived at as a result of investigations made by Scott, Yoakum, Kenagy, Cowdery, Bingham, Moore and others have been about as follows:

1. Executive groups seldom average as high in tests specifically designed to measure the characteristic abilities of selected groups of workers

in commercial and industrial occupations as do specialists in these occupations.

2. Executive groups usually average above the pooled averages earned by several diverse groups of specialists on a wide variety of tests. Executives have superior all-around ability.

3. No single test, when applied to executives, has succeeded in differentiating the poorer from the better executives.

In 1929 and 1930, Mason completed a series of investigations undertaken with the purpose of measuring differences between persons of known sales, research, and executive ability. The tests used included the following:

1. Analytical personal history record
2. General information
3. Reasoning in arithmetic
4. Judgment in estimating
5. Symbolic relationships
6. Word comparisons
7. Ascendence-Submission reactions
8. Vocational interests

The results of this investigation show the executive group to be considerably above average on the tests designated above by numerals 2, 3, 4,

5 and 6. The sales group rated high on judgment in estimating and low on symbolic relationships; the technical group was outstanding because of an extremely high rating on symbolic relationships, accompanied by a low rating on judgment in estimating. It is clearly evident from these results that sales and technical groups can be differentiated by means of single tests, while executives as a group are differentiated by a tendency toward consistency in a number of traits on a level above the average of an unselected group. It would appear from these results that many of the failures clearly to define executive ability by means of tests have been due to the failure to recognize that *above average standing on a large number of qualities which can be rated or measured is the true criterion of executive ability.*

Mason sought further objective indication of the characteristics of executive ability, by having executives, salesmen, and research workers rated, in regard to 33 traits, by competent judges. For convenience and to secure greater objectivity these traits were arranged under the following general headings:

1. Health and drive
2. Judgment of fact
3. Reaction to human qualities
4. Leadership

The results of this phase of the investigation were both enlightening and convincing. The members of the executive group were consistently above the average of all the groups rated on these traits.

These findings suggest the conclu-

sion that the executive is *a well-rounded individual* who does not deviate outstandingly from the average shown by persons of general intellectual superiority.

It is probable that executive traits are not clearly definable in terms of performance or tests of mental ability unless supplemented by temperament tests. That such is the case is suggested by Kornhauser and Kingsbury. Their conclusions were substantiated by the results obtained from the application of the ascendance-submission reaction test in Mason's investigation and later confirmed by Cleeton in results obtained from the application of personality trait questionnaires covering such qualities as submissiveness, dominance, social dependence, independence, extraversion, introversion, emotional sensitiveness and placidity.

Charters has shown that volitional traits such as ambition, perseverance, courage, industry, forcefulness and initiative are essential qualities in the leadership phases of executive talent.

E. K. Strong has demonstrated that 70 per cent of non-executives have interests characteristic of executives and that accountants, personnel managers, engineers, insurance salesmen and lawyers show an over-lapping of interests with executives to the extent of 80 per cent or more. The conclusion to be drawn from these results is in harmony with the findings reported above. Executive interests are diverse and broad in range, just as executive abilities are diverse and broad. Briefly, executive ability is broad-gage all-round ability.

Working from this general hypothe-

sis the authors have prepared an executive ability examination which includes the following sections:

1. Analytical personal history record.
2. General information test.
3. Reasoning in arithmetic.
4. Judgment in estimating.
5. Symbolic relationships.
6. Typical reactions (personality trait questionnaire).

7. Vocational interests.

8. Executive ability rating scale.

This examination is now being standardized. It is hoped that a suitable battery will be developed which can be applied both in the employment of men for executive duties and in the promotion of men to executive positions.

Personnel Research in a Normal School

BY MARTHA DOWNS, *State Normal School, Newark, New Jersey*

Miss Downs describes the methods of selecting and developing students in a progressive college for teachers.

THE task of the research worker has been described by W. W. Campbell in these terms: "He does not invent the truth, he does not develop the truth, he does not do anything whatever to the truth except to uncover it or discover it, and expose it to the comprehension of his fellow-men. . . ." Accepting this thesis, research is functioning in the State Normal School at Newark in the following ways:

First: Test data, secured and recorded by the Research Committee, are used in individual student guidance by the President, the Dean, the Director of Student-Teaching, counselors and other staff specialists.

Second: Recorded data are used by staff members in the scientific study of personnel problems.

Third: From time to time studies are carried on coöperatively with research groups in other teachers colleges, in universities or in national associations.

Fourth: Statistical investigations bearing on admission, grouping and marking are made for the administration.

Fifth: Annual bulletins provide staff members with information about each new class.

Sixth: Individual remedial work is set up on a basis of observed student deficiencies.

During the past four years research studies at Newark have emphasized selection, student sectioning, educational guidance, and prediction of academic or professional success. Some of these will be described in this brief résumé.

The contribution of research in the process of selection has been the improvement of the entrance examinations required of New Jersey normal schools and teachers colleges. Prior to 1929 these were largely subjective. They were easy or difficult according to the standard of the staff member assigned to construct the examination and the value of each question was assigned without experimentation. Since, however, an investigation of the scoring of the arithmetic examination made at this school in 1929 revealed the error of arbitrarily assigning values to questions, revision was necessary. Test items are now prepared by a committee of staff specialists from the several State teacher training schools. An experimental form of the examination is given to a sampling of the freshmen in the schools, whereupon an error analysis reveals the difficulty of the questions. Thus the order of the items is determined. Then scales that are comparable for all tests of the entrance battery are prepared. These determine the passing mark and predict within reasonable limits the number to

be passed. The tests used in successive years are made of equal difficulty or stepped-up so far as it is feasible to raise standards. This portion of the admission procedure is now on a scientific basis.

Further data useful in the educational guidance and in the counseling of each student are secured during freshmen orientation week through a battery of standard tests which measure abilities, achievement, and certain traits of personality. Results on some of these tests have been sent for three successive years to the Teachers College Personnel Association where they are compared with those of thirty to forty outstanding teachers colleges and liberal arts colleges of the United States. The record of the school at Newark placed it fourth in 1931, third in 1932 and second in 1933. For two years second place has been attained in the rankings on the academic aptitude test, which is evidence of the effectiveness of the State entrance examinations. They select a potentially capable group for professional training.

Another test in this battery is designed to measure reading comprehension. Last year a study was made to see what could be done to improve the status of the poorest readers. Students having reading scores below the twenty-fifth percentile for college freshmen, psychological examination scores that were relatively low, and academic records indicating trouble in the reading subjects were given a series of remedial lessons. In addition the health counselor investigated to find if these students had followed previously made recommendations for the correction of eye defects. When the group of fif-

teen was tested at the end of the year on a parallel form of the same test, the average gain was found to be 9.5 points. Eleven students showed decided improvement and seven were able to read at least as well as 25 per cent of college freshmen. Following these eleven students to the present, two have left school, five have made no marks this term below average or *C*, four have one or two marks of *D* grade (passing but unsatisfactory), and none has failed.

Not all of the program, however, is achievement testing. Certain tests are used to discover interests, to note leadership and other factors in personality development. Judgments on the personality pattern of each student are made four times a year by each staff member enrolling the student for class work. It seems advisable at present to keep most of these data confidential, to avoid prejudicing counselors and staff members with mere inferences. A way must be found, however, of bringing together the case study data in the cumulative record and these personality ratings so that valid predictions of professional success may be made early in the student's course. It is increasingly evident that high scores on the Morris Trait Test are an indication of leadership. Senior students who are doing questionable practice work have usually made low scores on this test. Special reference cases have as a rule either scored very high or very low on it. In the June 1932 class, twelve out of sixteen graduates who scored in the upper ten per cent were placed in teaching positions, while only six of the sixteen in the lowest tenth got jobs.

The Thurstone Personality Schedule used with the freshmen of September 1932 assigned scores to these freshmen in the first month not so very different from judgments made by teachers after a year of acquaintance. All of these facts are interesting but not as yet conclusive in formulating policies regarding specific uses of these data.

Further efforts to predict success have been made by setting up a regression equation based on certain factors¹ that could be learned early in a student's career. In the class for which the regression equation was set up, it was found that, out of the one hundred twenty-six graduating, seventy-six had the letter grade (A, B, C, D, E) predicted in the freshman year and fifty had grades only one letter removed from the prediction. *More* significant factors in the regression equation and perhaps more accurate marking would undoubtedly have improved the accuracy of the prediction. On the other hand, regression equations with numerous factors are cumbersome techniques not practicable unless much statistical service is available.

No very high correlations have been obtained to date between academic record and success in student teaching.² This may be due in part to the method of assignment of marks. However, there is some evidence that the highest degree of scholarship does not necessarily imply success in teaching.

¹These were the freshman point-hour ratios and the scores made on a leadership test, a psychological examination and a general prognosis test. The first was used as the independent variable and the other factors became dependent variables.

² $r = +.62 \pm .04$.

Some of the best teachers have been average students and a few of the best scholars have failed in teaching. On the other hand, it is certain that successful teachers do not come from the lowest scholastic ranks. Hence selective entrance on the basis of scholarship as one factor is a safe policy.

Last year a study of freshman marks was made to ascertain whether the combined faculty recognized differences in quality of class sections in assigning grades, when these sections have been arranged, without their knowledge, to show reliable differences. Entrance marks and psychological test scores were used in the organization of the groups. Results showed that marking could be improved. While the average grades of the sections as assigned by the faculty proved that they tended in general to rank the sections as they had been deliberately ranked, the differences were small. This is due to two causes:

1. Some staff members reduce the five point marking system to three in assigning grades, avoiding the use of D and E.

2. Not all departments are in the habit of giving certain objective or standard tests to the total freshman group.

There are other research projects under way at present:

1. Remedial studies in mathematics, in social science, in the biological and natural sciences and in English literature. These are based on analysis of student needs.

2. The assembling of data for a health attitudes test.

3. An experiment on liberalization

of the curriculum on the freshman level.

Some questions to indicate the nature of problems for the future are:

1. What are the most significant factors in the total cumulative record in predicting success in teaching?

2. What differentiated procedures should be set up for the selection of fine and industrial arts students?

3. What extra-curricular activities prove of greatest value after graduation?

Four years of work on the accumula-

tion of records, on the improvement of a few techniques or policies, or on some addition to knowledge have at least shown the multiplicity of possibilities for major endeavors in the future enormous possibilities of personnel research. As Buckingham has said, "If teaching these students is to include studying them, the job of teaching takes on new meaning. Its scope is broadened. Its meaning enriched. No other calling may then be compared with it. It is the great adventure."

Unemployment Insurance—Perhaps

BY OLIN FOSS MCCORMICK

Mr. McCormick deals with the subject of unemployment reserves and retirement annuities from a background of extensive experience as an adviser of industrial executives and financiers.

A WHILE ago, I talked too much to the Editor, and as a result could not refuse to express some ideas about unemployment insurance when requested to do so. Let me preface my remarks by saying that I do not approve of unemployment insurance in any form, but do approve heartily of retirement insurance although I object strenuously to the term old age insurance.

Before discussing the subject directly I should like to suggest an idea which might obviate, in a large measure, the necessity for strictly unemployment insurance. At first blush the suggestion may appear drastic and unreasonable, but deliberate consideration might show that it is not.

Fundamentally, there are not enough jobs to go around, and this condition is not unusual. Any plan which will provide a large number of jobs for immediate use and, at recurring intervals, will keep on providing more openings than have heretofore existed, should make it unnecessary to insure against unemployment. From figures which are probably not very accurate, it appears that there are approximately thirteen million people over sixty years of age in the United States. I can find no figures that indicate how many

of these people are employed. A fairly high percentage, however, must be. Let us assume, without any reason, that there are about four million persons over sixty who are employed. Let us assume that these four million people be retired tomorrow morning. Obviously, four million jobs and four million promotions would be immediately available. If this retirement program were continued permanently, there would be a continuous flow of openings, greatly in excess of the present number, since retirement at age sixty is not customary.

If retirement at age sixty could be enforced immediately and continued, it would be quite feasible for industry to pay retirement salaries to those retired, at the rate of about half pay, without imposing a very great burden on anyone, since the half pay saved could be applied toward necessary promotions and toward the employment of those who would be employed to fill vacancies in the lower brackets. At worst, it would mean that persons promoted would receive somewhat lower salaries than they might normally expect to receive upon promotion, and newcomers would be in the same boat. To put it bluntly, those who were favored with premature promotions

and those who were unexpectedly employed might have to pay, by accepting salaries somewhat smaller than they had hoped for, the partial salaries of those who had retired in their favor.

If, at the same time, compulsory retirement insurance were enforced, the temporary burden, imposed upon industry and individuals to pay those who retired, would gradually be lessened as retirement pay accumulated in favor of those who, in future, would retire when they reach age sixty. It is apparent that this temporary retirement burden would disappear in considerably less than twenty-five years, as older employees, who had retired, died and as retirement insurance funds increased to the point of paying all retirement salaries.

I have no desire at this time to go into details covering the two suggestions made above,—immediate and continuous compulsory retirement, and compulsory retirement insurance. I wish, however, to point out some benefits which might accrue if such a plan were in effect.

A large number of persons might be employed immediately and continuously, perhaps a number sufficiently large to render unemployment insurance unnecessary, or at least greatly reduced in volume. The burden of expense would not be too heavy, even at the beginning, and relief would be rapid. Adequate retirement insurance would assure a reasonable living wage to all persons who retired at age sixty after a reasonable term of employment. Leisure time would be concentrated in a group of persons quite competent to utilize it productively, without additional remunera-

tion, perhaps as advisors to business, to the professions and to governments. The retirement of persons at sixty would cause the management of industry to be placed and retained in the hands of younger persons, thus bringing management into closer contact with and better understanding of the thoughts and conditions of current generations.

If the ideas suggested may produce the results indicated, perhaps they are worth thinking about. Anyway, I have given them, uninvited, and I now proceed to discuss the subject assigned to me—unemployment insurance.

Several plans of unemployment insurance, so called, have been proposed. A few are in existence under trial. These plans have been evolved by experts, after serious study. It is not my intention nor my right to criticize them but rather to approach the subject of unemployment insurance from an angle which does not seem to have received much consideration.

As I see it, the plans already proposed intend to pay rather small sums of money for somewhat limited periods to people who are out of work, all payments to be made from a general fund, in one plan to any person unemployed and in the other to persons laid off by specific employers. All such plans apparently include the setting up of a governmental agency to collect, handle, and distribute funds. As a corollary to such unemployment insurance by governmental agencies, it seems essential to have some sort of governmental employment agency, in order to relieve the insurance agency of paying benefits longer than is absolutely necessary. I am bound to con-

clude that all plans under consideration at the moment are in the nature of doles financed by industry and, in some plans, partially by employees, and that all such plans require an enormous overhead expense to determine the individual's eligibility to receive the dole, to determine how long he shall receive it, and to obtain a job for him if possible. It is my impression that these plans are so cumbersome and so expensive as to be impractical, since they would probably divert a very large portion of the available funds to management rather than to individuals out of work.

There is an old adage, "the Lord helps him who helps himself," based on the natural law of the survival of the fittest. It is a pretty good basis from which to consider social insurance. On such a basis, it seems reasonable to conclude that each individual is bound to do whatever he can to protect himself, especially to protect himself against unemployment.

Also, it is logical to assume that employers who receive valuable services should be willing to do something financially to insure their employees against hardships which may arise from necessary unemployment. As a matter of fact, a great many employers have insurance policies with standard companies, which are known as retirement insurance policies. When an employee ceases work at a given age—say sixty-five—he is entitled to receive for the rest of his life certain sums of money per month, which have been contributed, generally, jointly by himself and his employer during the time of employment. It seems to have been proven, in many industries, that

the employee is willing to protect himself if given the opportunity, and that the employer also is willing to contribute to this protection.

After all, it seems to me that this retirement insurance is, in effect, unemployment insurance, since it is used to pay an individual who does not work productively. The only difference between retirement insurance and so-called unemployment insurance is the fact that retirement insurance does not begin until after a certain age. In connection with existing retirement insurance policies there are disability rights, so that, if an employee is totally and permanently disabled, he may receive his retirement allowance in a modified form at an earlier age, without the necessity for the continuation of payments of premiums either by the employer or the employee.

It has occurred to me that it would be a rather simple matter to broaden standard retirement insurance policies so that they might be used as unemployment insurance, maturing at any time and as frequently as necessary.

Suppose, for example, that an employee enters the service of a company, and beginning at that time he contributes a percentage of his salary as premiums on an unemployment or retirement insurance policy. His employer makes a contribution also. The size of the contributions governs the ratio between average salary and retirement pay which will be due the employee when he has reached retirement age. This ratio increases periodically as the term of employment lengthens.

Suppose this employee works for a period of five years and then becomes

unemployed. Since both he and his employer have been paying premiums regularly to an insurance company, he has a credit of at least the amount already contributed, perhaps plus interest. Suppose at the time his unemployment begins, this employee be given a certificate, against the insurance company, indicating that he is entitled to receive so many dollars, already contributed. Against this credit he is entitled to draw, beginning at a given date, weekly amounts predetermined on some maximum and minimum basis.

This individual may continue to draw these sums until the total value of the certificate has been used up. If, by that time, he has not obtained another position, he turns to the taxpayers for support, and this would happen under any plan at times when unemployment was general and protracted. If, however, he has obtained another position before his certificate has entirely lost its value, he would deposit the balance-value of this certificate with his new employer and would continue proper payments of premiums to apply against retirement insurance. Thus he would retain the current value of his past contributions and commence against to build up a retirement insurance fund. I believe it is not impossible to carry out this program even though employment periods may be of very short duration.

It seems to me that the method herein suggested could be operated with a minimum of legislation and governmental control. The only legislation obviously necessary is such as would force each employer and each employee to contribute certain sums

of money as premiums. All other matters pertaining to the plan would be carried out by the insurance company selected. It might be necessary to set up a governmental commission to see to it that insurance companies place these funds in especially safe forms of investments, and to determine the rate of interest which insurance companies could afford to be credited to these retirement or unemployment accounts, but these regulations might be handed by a governmental agency already in existence.

It seems to me that there are several points of interest in the development of such an idea. Any person who was employed practically all of his life would be assured of an excellent income upon reaching retirement age. For persons who were in and out of jobs during their working lives, the measure of their retirement annuities would be in exact proportion to the labor they had given, and this seems to me to be a fundamental policy on which all earnings should be based. Furthermore, during periods of unemployment, each individual would be able to live on his past earnings at least for a limited period. He would be self-supporting and self-respecting. An individual out of work would have an additional reason for endeavoring to obtain work as quickly as possible, since he would realize that his retirement annuity would be reduced by each day he remained out of work, and increased by each day he worked.

I am hopeful that these ideas, which have been given in general terms and with very little attention to detail, may be studied, if they have not already been studied, by those experts

who are interested in enforcing unemployment and old age insurance. It is apparent that such a plan has an elasticity, at least, that no other plan has, since it permits employers to utilize existing insurance companies and existing and tested insurance plans, with some modifications; and since legislation would be limited to setting up and enforcing only minimum insurance premium contributions, leaving it to employers and employees to increase such contributions if they should so desire, thus improving the minimum legal requirements which would certainly be small.

Please let me say again that I have

insufficient knowledge to criticize plans which have been proposed, and also insufficient experience, from the actuarial standpoint, to be entirely sure that the ideas I have suggested are practical, although there seems to be sufficient evidence that they are. In any event, it is my belief that social insurance should be based on the work periods of individuals, that such insurance might well be handled through existing agencies, and that individual beneficiaries should receive only funds which have accumulated to their respective credits, rather than funds which have accumulated in pools generally subscribed to.

News Notes

NEW HAMPSHIRE AND UNEMPLOYMENT INSURANCE

The New Hampshire Commission on Unemployment Reserves, under the chairmanship of Herman Feldman, has issued a description of its carefully considered recommendations to the State legislature. The Commission proposes that an unemployment insurance bill be passed, contributions to begin October 1, 1935 and payment of benefits to begin a year later.

Some of the features of the plan follow. All occupations are to be included, except farmers, employees in domestic service in private houses, government employees, school and college teachers, seasonal industries, and several miscellaneous small groups. Establishments employing fewer than five workers are excluded. As to wage limits, all manual workers paid on an hourly, daily, or weekly basis are included in the plan, as are salaried workers who earn less than \$150 a month. Contributions from employers are to be a maximum of 2½ per cent of the payroll of eligible workers, but there will be reduced rates for employers who provide steady work. Employees are to contribute one per cent of their weekly wage. The weekly benefit for a totally unemployed person is to be 50 per cent of his total full-time weekly earnings, but with a maximum of \$14.00, and a minimum of \$6.00. He will be eligible for a maximum of 16 weeks of benefits for total unemployment in any one year, but will not be entitled to more than one week of benefit for every three weeks of full employment within the fifty-two weeks prior to his registration as unemployed. A waiting period of three weeks of consecutive unemployment is provided for. Benefits are not payable to employees while on strike.

EASTMAN KODAK'S SUGGESTION SYSTEM

The Eastman Kodak Company's outstandingly successful suggestion system was described by Virgil M. Palmer before the recent annual meeting of the American Society of Mechanical Engineers. He told what changes had been made since the system was introduced in 1898, and why; described the present system in detail; and appraised the actual results accomplished.

The suggestion system is set up as a responsibility of the personnel department with a suggestion secretary reporting to the plant employment manager. With 7300 employees, the work takes the full time of a combined stenographer and filing clerk and three-fourths of the secretary's time. The secretary is in a favored position to maintain close contact with employees and to get and hold their confidence. The suggestion secretary aids suggesters, as necessary, to give better expression to their ideas. He gives out the suggestion-award checks, and explains personally the reasons for rejecting suggestions. He follows up suggestions referred to the department superintendents for consideration, acts as secretary to the suggestion-award committee and prepares a monthly "Suggestion Bulletin."

From the points of view of cash savings made and morale-building, the plan has been a distinct success. This is no doubt due in large part to the higher management's personal interest, to constant publicity, to the careful manner in which all administrative details have been worked out, and to the management's attitude of appreciation of any and all suggestions for improvement, with never a criticism of former conditions which the suggestions

seek to improve. In connection with this last point Mr. Palmer wisely said, "I know of no surer way to secure bitter foreman resistance to a suggestion system than for the management to criticize the conditions disclosed through suggestions as needing improvement."

Executives planning to start a suggestion system or to reorganize an old one will want to read Mr. Palmer's address, which was preprinted in the November, 1934, number of *Mechanical Engineering*.

AMERICAN MANAGEMENT ASSOCIATION TO HOLD PERSONNEL CONFERENCE

The American Management Association's annual Personnel and Industrial Relations Conference will be held in Pittsburgh, February 6 to 8. Important topics to be discussed are: collective bargaining; getting facts for administering personnel policies; personnel problems of technological change; getting information to employees; training problems; wage and salary administration; and economic security.

The program has been arranged by Harold B. Bergen, Vice President of the American Management Association, and Director of Industrial Relations, Procter and Gamble Company.

FATIGUE ALLOWANCES IN TIME STUDIES

Minimizing of fatigue in workers, a force which bores at business and industrial profits from within, was discussed by a psychologist and an industrial engineer at the recent conference of the Federated Management Societies, held in New York.

Paul S. Achilles, managing director of the Psychological Corporation, was the psychologist; John F. Campbell, of Raybestos Manhattan, Inc., was the engineer.

After discussing "The Problem of Allowances in Time Studies as Viewed by the Industrial Psychologist," Mr. Achilles summarized as follows:

"The first point in summary, is that Taylor's formula, and I believe other formulas for fatigue allowances assume 100 per cent fitness of the worker for the work. This assumption can only be approximated. Therefore in figuring fatigue allowances we

ought to put something in the formula to represent the degree of fitness of the worker for the job.

"The second point is that we generally make a fatigue allowance apply to *all* workers on a job whereas we tend to measure only a few. If not too impractical it would probably be better and fairer to base our allowances on at least some measurements of *all* the workers on a job and intensive measurements on a few of them who show the most typical characteristics of the group.

"The third point is that the discrepancies between the allowances made by different time study men on the same job show clearly enough the extent to which allowances are matters of judgment rather than exact measurement.

"The fourth point concerns the assumption that money is the only, or even the most potent incentive available. We need many more experiments like those which Robert B. Wolfe has been bold enough to undertake with non-financial incentives, such as progress records and other means of showing the worker the meaning of his task."

Mr. Campbell, who discussed "The Problem of Allowance in Time Studies as Viewed by the Industrial Engineer," cited studies that have been made in time allowances. He presented a base table of allowances which have been used in allowing for fatigue in specific instances, as follows: un-encumbered walking, 5 to 6 per cent; attention time, 5 per cent; encumbered walking, 12-15 per cent; periodic work near high or low temperature, 15 per cent; continuous work in high or low temperatures, 20-50 per cent; machine operations (general), 12-15 per cent; machine operations (high speed), 15-20 per cent; machine operations (repetitive and sleep inducing), 15-20 per cent; hand operations (long cycles), 12 per cent; hand operations (short cycles), 15-30 per cent; service operations, 8-12 per cent; continuous work in fumes, dust, etc., 25-60 per cent; periodic work in fumes, dust, etc., 15-18 per cent; miscellaneous and general operations of no particular strain, 10-12 per cent.

Mr. Campbell emphasized that, "The

one great problem an industrial engineer faces is 'fairness to direct labor in all dealings.' The savings from any well defined labor system are usually great and to the satisfaction of management. Why, then, jeopardize the successful operation of your system by standards not including proper allowances for all functions performed? That small one to three per cent which may be gained by operators through your calculations being necessarily loose in including allowances for auxiliary functions, might easily mean the difference between sub-normal and normal operating efficiency. Sub-normal operations are costly."

FIVE THOUSAND YEARS OF SAFETY

Let's turn back the clock. Back to the very dawn of history, 3080 years before Christ.

The scene is ancient Egypt. A young man is at work helping build the first of the pyramids. He is an efficient, careful worker; and, through some magic formula, has found the secret of perpetual youth.

He continued to work and to work safely. After the pyramids were finished our hypothetical hero followed other pursuits. He helped build the grandeur of ancient Greece and Rome. He was busy the year Christ was born and he carried on into the "Anno Domini" era; thence into the early Christian days; from there into medieval times and on down into our own Twentieth Century. And finally we find our mythical friend at work in 1934, having labored more than 5000 consecutive years without injury and as late as Dec. 17th he was still piling up the accident-free hours.

Fifty centuries of productive work, without an accident!

This is no fairy tale. We are simply visualizing what the National Safety Council declares is the most remarkable safety achievement in the history of American industry.

The Western Clock Company, of La Salle, Illinois, has amassed a grand total of 10,029,681 man-hours without a single lost-time accident.

Their last lost-time mishap occurred on the 17th of December, 1931. Three years

have passed without anybody getting hurt seriously enough to prevent return to work the next day, in a plant employing about 2300 people, mostly engaged in so-called hazardous pursuits such as the operation of power presses and screw machines.

You see, to equal that record, our hypothetical friend would have had to start work way back in the pyramid building era more than 3000 years before Christ; and he would have had to work straight through the years and centuries—40 hours a week and 50 weeks a year—right up to the present time.

Only one other company has approached this achievement, the E. I. du Pont de Nemours & Co., Old Hickory, Tenn., plant, with a record which terminated at the 9,166,634 hour mark. A few other plants are in the five, six, and seven million hour group at the present time and are still piling up the hours. But Westclox is first to pass the ten million hour mark in this, and as far as known, any other country.

EMPLOYMENT OUTLOOK

The New York State Employment Service now distributes a bulletin, *Employment Outlook*, to its placement interviewers. The purpose is to make available to interviewers information about current changes in the labor market and seasonal and cyclical business trends. A special administrative unit has been set up to gather such information and to make studies of particular industries, covering such items as size of establishments, distribution of plants in the State, and the nature of operations and occupations.

PROGRAM FOR UNEMPLOYED YOUTH

Mary H. S. Hayes, Director of the Vocational Service for Juniors, has been loaned to the Federal government's Children's Bureau for a three month period, in order to initiate a program of vocational adjustment for recent school graduates who have been unable to get jobs.

GUIDANCE AND PERSONNEL ASSOCIATIONS TO MEET

February 20 to 23—Atlantic City—is the time and the place of the annual conven-

tion of the American Council of Guidance and Personnel Associations. Member organizations which will hold their annual meetings at this time include the National Vocational Guidance Association, American College Personnel Association, and the National Association of Deans of Women.

EMPLOYER-EMPLOYEE RELATIONS IN THE GOVERNMENT SERVICE

In its Fifty-First Annual Report, the U. S. Civil Service Commission requests that it be authorized to investigate and conciliate differences—arising out of removals, reductions, or suspensions—between employees in the competitive classified service and their superiors. The Commission also requests that, in order to facilitate as far as possible the adjustment of differences within the departments, committees be established to make inquiry and adjustment whenever possible.

DISMISSAL COMPENSATION IN AMERICAN INDUSTRY

Two hundred and twelve companies in this country have been reported as paying dismissal compensation at some time before April 1934, according to a survey reported by Everett D. Hawkins in the November issue of *Monthly Labor Review*. Those firms, together with their subsidiaries, normally employed before the depression between 2,250,000 and 2,500,000 men. Although a minority of the companies have announced the number of dismissed employees or the amount of compensation, reports from 60 firms definitely state that they have compensated more than 80,000 men. These dismissed employees received, it is estimated, between eight and nine million dollars. In addition to describing the extent of dismissal compensation, Mr. Hawkins analyzes current practices with regard to methods of financing, methods of payment, and determination of eligibility, and outlines recent changes in dismissal compensation plans.

Personnel Books

EDITED BY O. MILTON HALL

GETTING READY FOR UNEMPLOYMENT INSURANCE

AN HISTORICAL BASIS FOR UNEMPLOYMENT INSURANCE. By Industrial Relations Counsellors, Inc., of New York. Minneapolis: University of Minnesota Press, 1934, 306 pp., \$3.00

A PROGRAM FOR UNEMPLOYMENT INSURANCE AND RELIEF IN THE UNITED STATES. By Alvin H. Hansen, Merrill G. Murray, Russell A. Stevenson, Bryce M. Stewart. Minneapolis: University of Minnesota Press, 1934, 201 pp., \$2.50

Reviewed by MILLICENT POND, *Scovill Manufacturing Company, Waterbury, Conn.*

At last we in the United States seem to be facing seriously the problem of the costs of unemployment: Must the individual worker bear the load until he breaks under it, or can we in some way spread it over all groups? Must we always meet the needs of depression periods with hastily contrived expedients, or can we plan ahead for them? We are certain to be called upon in the near future to act on the possibility of unemployment insurance for this country. What are the fundamental issues, and what the final implications of one plan or another? Is there serious danger that we will adopt an inadequate or a ruinous plan, or is the danger greater that on account of our fear of consequences we may defer action altogether? Certainly it will be folly for us to make our decision without assimilation of all available pertinent facts.

These two books, companion volumes, admirably present (1) the history of unemployment insurance and relief in Great Britain, Belgium, Germany, Switzerland, and the United States, including inceptions, provisions, changes, and sources of changes; (2) related current statistics, drawn from depression studies in this country; (3) the fundamentals of a program of unemployment insurance and relief in this country; (4) the theoretical aspects of the investment of unemployment reserves. In an impartial, yet always vivid manner, by

means of simple language and a very skillful arrangement of material, they accomplish for the reader a surprising clarity of impression from complicated facts, at the same time furnishing him with full details upon which to draw his own conclusions. They are well furnished with tables, charts, subject headings, subject and chapter summaries, and are fully documented and indexed, to serve the purpose either of quick reference or careful study.

The first of the two books "treats of the experience in Great Britain, Germany, Belgium, and Switzerland, and the voluntary plans and legislative schemes of the United States, and attempts to point out the principal derivatives of the experimentation with unemployment insurance in these countries." It proceeds by giving first a very brief summary of the main stages of development of unemployment insurance in general, then a fuller discussion of the development in each of the four foreign countries and the United States in turn. The outstanding features of the experience of the four foreign countries are summarized comparatively, and the authors find that "in each country the character of the unemployment system has been influenced by the national history and institutions." They note the influence of political changes, of psychological pressures, of financial pressures. Among the institutions which

have played important rôles are the public employment offices. In the United States they consider that even the limited experience has characteristics which suggest certain future developments.

The rest of the book is full of detail, yet it remains clear. Eighty pages are given to a comparative analysis of the laws in the four European countries, under the headings: basis of coverage, definition of unemployment, eligibility for benefit, source of income, benefits (size and structure), and administration, and these are followed by thirty pages of similar comparisons of all known company and joint plans in the United States, and of all official proposals for legislation, whether passed or not. Finally, in an appendix, twenty-five pages are given to a complete tabulation of the provisions of all plans discussed, with corresponding items arranged in parallel columns for quick and accurate comparison.

The second book presents the fundamentals of a program for the United States, first in the form of a brief and tentative outline, and then in full discussion of the same essential topics listed above, namely, basis of coverage, definition of unemployment, etc. Under each heading, existing provisions in other programs are again considered, with special relation to conditions in the United States, and, in the case of the best of them, with consideration of their value and practicability here, their implications for the future if adopted in this country. The authors here give statis-

tical material from current studies of depression unemployment and need, and if projected improvements on existing insurance provisions have been suggested, they discuss those. In this way they build up their recommendations from item to item, often giving their readers a choice between two alternative definitions, or indicating the point at which future changes may be expected to take place.

Throughout the book there runs the conviction that unemployment insurance in some form must come in this country, and that it must be integrated with but distinguished from emergency relief for workers who have exhausted their insurance rights, but who, in a deep depression period, are still unemployed. Accordingly, a tentative plan for emergency unemployment relief is given in outline. It is the opinion of these authors that the cost of unemployment insurance in this country should be met by employers and employees, that of emergency relief by federal, state, and local governments.

Finally, in a section devoted to the problem of the investment of unemployment reserve funds, in which the authors give credit for assistance to six other men beside themselves, there is a penetrating discussion of the effect on business stability of funds placed in deposits with various types of banks, of funds invested in commercial paper or government bonds, of the redemption of bonds owned by unemployment reserve funds in United States legal tender notes, and of unemployment reserve funds placed in cash hoards.

PERSONNEL PRACTICES SURVEYED

INDIVIDUAL AND COLLECTIVE BARGAINING IN MAY, 1934. Prepared and published by National Industrial Conference Board, Inc., New York, 1934, 36 pp., \$.50

RECENT DEVELOPMENTS IN INDUSTRIAL GROUP INSURANCE. National Industrial Conference Board, Inc., New York, 1934, 46 pp., \$.50

Reviewed by ORDWAY TEAD, *Harper and Brothers*

Each of these studies is a bringing up to date of earlier documents on the identical subject. Each indicates that a further

strengthening of personnel procedures is under way in the fields covered. As representative samplings of current experience

with "collective bargaining" and group insurance, each is informing to a degree. Indeed no other agency supplies just the type of factual data which these Conference Board studies set forth. And it is a genuine addition to the record of going developments to have this kind of investigation so continuously undertaken. At the least they reveal trends; and at the most they supply hints to managers as to lines of action in personnel matters that other corporations have found profitable.

The upshot of the collective bargaining study is that of nearly 3000 companies reporting in May, 1934, 45 per cent had employee representation, 46 per cent had individual bargaining and 9 per cent had agreements with labor unions. And the comparative figures "indicate a continued drift toward collective bargaining but at a rate considerably reduced from the large scale changes that took place in the early months of the operation of the Recovery Act."

The study of group insurance extends an earlier report of 1929. The growth of

this feature has been remarkable both in life insurance provisions, health insurance and old age annuities. The grand total of group life policies in eight leading companies is around nine billion dollars, covering nearly five million workers. Cancellations during the depression have been large although new business has kept the totals from fully reflecting this fact.

The findings are too numerous to summarize briefly. They do not, however, include any critical appraisal of objectives or results. At a time when proposals for public social insurance are so much to the fore in legislative halls, it is perhaps not unreasonable to suggest that some comparison of public and private provisions might have been ventured. The coverage of private plans although impressive is far from complete throughout the manual working class. And with the extent of cancellations here recorded it is inevitable that a question arises about the desirability of adding the more assured and more inclusive provisions which social insurance will bring.

PSYCHOLOGY FOR EXECUTIVES

By Elliott Dunlap Smith. Revised Edition. New York: Harper, 1934, 327 pp., \$3.50

Reviewed by ERIC A. NICOL, *Philadelphia Gas Works Company*

In the discussion of human problems, E. D. Smith has gone further than many writers. He not only has built up an appreciation of psychology in dealing with human relations problems, but he also has provided help and systematic methods of analysing them. His book, *Psychology for Executives*, covers the work of the various industrial executives in a way that provides a considerable quantity of information that can be applied in every-day supervision. The illustrations are apt and reflect the fact that the author has an intimate knowledge of day-to-day happenings in an industrial concern. Regardless of the extent of one's scientific education in psychology, the treatise of man's habits, actions and reactions can contribute to sound and practicable methods in directing executive habits.

Quickly disposing of the age-old controversy of environment versus heredity by acknowledging that each exerts a certain influence, the author launches into a detailed discussion of habit, the development of habits, habit and thought, habit and desire and group habits. "Look to your habits," admonishes the author, "for habits may become masters instead of servants."

Upon the development and control of proper habits, rests success—both individual and industrial. Smith holds that harmony can be achieved within an industry by re-educating both executives and workers to new and better habits. "Because of the prevailing and creative power of manual, mental and moral habits; to every person—employee or executive—and to each organization; life is a reciprocal experience. While a person is reacting to

his environment, his doing this is in turn acting upon and forming his character. Organizations are likewise constantly being made by the habits formed by their actions in regard to their environment. And in thus forging the habits which forge ourselves and our organizations, insofar as we are able to work constructively in devising solutions and relationships which unite all desires in the service of the whole, our organizations are freed from the ravages and the devastation of destructive conflicts. It is by this means that the life forces of man or organizations are knit together."

Psychology for Executives: A Study of Human Nature in Industry might well have been two books. "Psychology for Executives" might have been added to the large group of works on "self-development" and included those portions of the book dealing with the attitude and behavior of the executive himself. "A Study of Human Nature in Industry" might have covered the reaction of the worker to the many hypothetical situations discussed. To jump quickly, as the author does, from one side of the fence

to the other, is at times confusing to the reader. Though the book contains a wealth of material and illustration, it is not always of absorbing interest.

It does, however, make a real contribution to the Personnel Department through its appendices wherein are contained several "Check Lists" for Executives. They make this revised edition a distinct improvement over the original volume. They are worth having in any executive's library for reference purposes.

The "Check List for Handling an Employment Interview" is one of the best, being both complete and practical. Every employment interviewer might advantageously review it periodically. The "Check List for Handling a Disciplinary Interview" contains sound advice which, if followed, would insure the employee a fair hearing in such cases.

In addition to the "Check Lists," the book includes a well planned reading list in psychology which should be helpful to those desiring to read further in that field.

NEW CAREERS FOR YOUTH

By Walter B. Pitkin. New York: Simon and Schuster, 1934, 236 pp., \$1.50

Reviewed by ROBERT T. HILL, *New York State Employment Service*

Wanted: Thoroughly reliable, up-to-date, forward, not backward looking information on occupations and careers! For young men and women, to help them plan their working lives intelligently.

This book might be regarded as a partial response to such an advertisement—were there such an "ad."

In his usual popular, incisive style, Professor Pitkin "goes to the mat" with some vocational "guiders" and vocational agencies. He objects to much that young people are told about prospective careers. Most of what we believe or are told, he says, is incorrect and misleading.

So Professor Pitkin talks plainly and to the point to young people about making a living.

Be correctly informed, he says, but by all means be realistic. Moreover, don't be misled by what has happened in the past. One's work lies ahead, not behind him. Therefore, he should understand what is going on now and what is in prospect in business, industry, in the professions and in other occupational fields.

Young people are plainly told that many of their cherished ideas and much that they understand or have been told about work is incorrect for the simple reason that things are not what they used to be and never will be the same. Rapid changes in the quantity, quality and character of production have utterly changed the face and character of occupational careers. Consequently, we must change our ideas about jobs, incomes, training, education—about

most everything that has any bearing on making a living.

Much of the book is devoted to detailed, illuminating information about various occupations in over-crowded fields, and in new fields of work, secured from authoritative sources by a research staff. There are many stimulating, thought-producing suggestions aimed to help serious but not too solemn young people to develop reasonable and helpful attitudes toward work and living.

This book will give many readers, especially those who have acquired certain traditional ways of occupational thinking, a rather bad half-hour or so. It frankly demolishes or tries to demolish certain "cherished" ideas that no longer, in the judgment of Professor Pitkin, should be cherished. It will be good for them as well for men and women "from seventeen to thirty-two" to whom the book is addressed.

SELECTING INSURANCE SALESMEN

THE USE AND VALUE OF SPECIAL TESTS IN THE SELECTION OF LIFE UNDERWRITERS. By Verne Steward. Author and Publisher, 1116 East Eighth Street, Los Angeles, California, 1934, 93 pp., \$3.00

Reviewed by RICHARD S. SCHULTZ, *The Psychological Corporation, New York*

Undesirable men must be eliminated at the start and the number of licensed insurance agents must be reduced. Those licensed should be better selected. The 50 per cent turnover among agents, which is not unusual, must be considerably decreased.

A ready package, a composite inventory with a 100 point rating system is offered for distribution to agencies as an aid toward improving personnel conditions, and selection and training of life underwriters. The inventory is a handy means of measuring and recording such experience information about a prospective salesman as his mental ability, education, background knowledge, emotional stability, dominance, group activities, financial status, marital status, and age. Each item receives a certain number of points, and the total number of points received by an applicant indicates the likelihood of his success as an insurance salesman.

The weights in this point system were determined by squaring the "coefficient of correlation" (mean square contingency method) between the criterion and each factor in the inventory. The criterion of success was based on ratings (failure, borderline, successful) made by each underwriter himself and the agency manager or

supervisor. A very successful rating was given to men whose annual earnings were \$6,000 for three or more years with "the production of a good quality of business." "In approximately two-thirds of the cases, the individual salesman and his manager made the same rating as to class group. Where there was a difference of opinion the writer personally examined the record of the salesman and made the decision." . . . "The prognostic value of the suggested point system is evidenced by the correlation of .52 with the criteria, and the measurement of 27 per cent of the attributes of success in the field." In the last chapter the author offers suggestions for a plan that he would consider in repeating this study and enumerates problems and goals to be aimed at in professionalizing the life underwriter.

This study is based on 309 life underwriters scattered through 20 agencies in Los Angeles. The monograph is written somewhat in the manner of an appeal to life insurance men. Yet it is copiously interspersed with background literature and technical explanations, which are not likely to be very illuminating to the lay reader. More pertinent information regarding statistical and experimental procedures would

have considerably enhanced the value of the monograph for other investigators in this field.

Dr. Steward does not give us enough information to make a full appraisal. Perhaps he will prepare an additional report which will establish more clearly the objectivity and reliability of the criteria, consider the low reliability of the background

knowledge test, explain the high subjectivity and probable unreliability of some personal data items, demonstrate an objective basis for assigning points to scores for each division of the inventory, and include data to show the validity of the composite inventory and the point system for several of the agencies in the experimental group and for other agencies subsequently tested.

AFTER THE SHUTDOWN

By Ewan Clague, Walter J. Couper and E. Wight Bakke. New Haven: Institute of Human Relations, Yale University, 1934, 153 pp., \$2.00

Reviewed by RALPH G. HURLIN, *Russell Sage Foundation*

This study is of value both for its findings on a subject of large current interest and as an example of research method. It consists of parallel studies of the workforces of two industrial plants in neighboring Connecticut cities following the final closing of the two plants in 1929. It is especially recommended to persons who suppose that the case-study and statistical methods are contrasting and mutually exclusive methods of investigation. Here two case studies employ primarily statistical methods. The study is in two parts. One by Clague and Couper is concerned with the readjustments of the two groups of workers for roughly a year after the shutdown. The other by Bakke relates to the experience of only one of the two groups during the next two years of industrial depression.

The study affords specific measurements of the severity of the burden imposed on these workers by an industrial decision over which they had no control. While the results apply to the two cases studied, and to shutdowns complicated by ensuing unforeseen depression, they are significant of the huge risk to which labor is subjected

by the present industrial system even when management and the community attempt to be relatively considerate. There is a valuable appraisal of the effect of the dismissal wage and pensions, which were paid to certain employees of both plants. For the New Haven group as a whole, the wage income loss over 1928 was 52 per cent (allowance might well have been made for real wage changes in this period). Of the total loss of income the workers bore 86 per cent, company pensions offset 6.7 per cent, and charity covered only 7.3 per cent.

Appendix B gives for Part I of the study a satisfying account of methods followed. The use of few investigators and their identification in the report, the full examination of plant records of each employee before field investigation, the formulation of the schedule in the light of preliminary field investigations, and the test of the validity of information supplied by workers by comparing data obtained in interviews with the same items as shown by the plant records, are noteworthy. The lack of any account of methods used in the survey underlying Part II is disappointing.

INDUSTRIAL ARBITRATION IN THE BOOK AND JOB PRINTING INDUSTRY OF NEW YORK CITY. By James F. Bogardus. Philadelphia: University of Pennsylvania Library, 1934, 105 pp., apply.

This report is both historical and analytical. It describes the history of arbitration

in the printing industry in New York, finding such arbitration to have been highly successful. The chief reasons for the relative peace in this industry are held to be the century-old background of collective dealings, equality of bargaining power between employers and unions, stability of

the industry, the fact that employing units are relatively small and often owned by former union workers, the skilled and high type workmen, the type of arbitration machinery used, and the habit of arbitration which has been built up over a period of years.

UNEMPLOYMENT AND RELIEF. By Robert G. Elbert. New York: Farrar & Rinehart, 1934, 136 pp., \$1.00.

This is an independent business man's thoughtful analysis and proposal covering the problems of unemployment compensation and relief. It has refreshing honesty and directness of approach. It is clear, liberal and broadly conceived. However much the experts may differ with the author on minor points, the essential point of view and methods are well thought through. It is distinctly encouraging that this kind of book comes at this time from an executive whose words should carry real weight for those other executives who will read them in as unprejudiced a spirit as they are written.

CRYSTALLIZING PUBLIC OPINION (New Edition). By Edward L. Bernays. New York: Liveright, 1934, 218 pp., \$2.50.

This new edition is not a revised edition, but a reprinting of the same book which appeared eleven years ago. Although some of the illustrative material seems dated, Mr. Bernays' book remains the foremost guide to the art of dignified and sophisticated ballyhoo.

PRINCIPLES OF GUIDANCE (Second Edition).

By Arthur J. Jones. New York: McGraw-Hill, 1934, 456 pp., \$3.00.

This is a thorough revision of a text book in guidance which has been extensively and successfully used in college and university classes. Entirely new chapters have been written on "Types of Problems Confronting Young People," "General Methods of Guidance," "Leadership Guidance," and "Leisure-Time Guidance." Other portions of the book have been brought up to date, although no change has been made in the author's conception of the fundamental principles and assumptions underlying guidance.

VOCATIONAL GUIDANCE AND SUCCESS (Second Edition). By Edward J. Gallagher. Milwaukee: Bruce, 1934, 203 pp., \$1.20.

New edition of a book for school children, designed to help them choose and eventually succeed in an occupation.

PSYCHOLOGICAL DIAGNOSIS IN SOCIAL ADJUSTMENT. By Percival M. Symonds. New York: American Book Company, 1934, 362 pp.

Dr. Symonds describes the uses of psychological measurement in the diagnosis of (1) criminal tendencies, (2) mental disorder, (3) citizenship and leadership, and (4) vocational fitness. The latter section would presumably be of chief interest to readers of this magazine, but unfortunately it is that one about which the author appears to be least qualified to write. One gets the distinct impression that Dr. Symonds' knowledge about selecting employees has been gained through reading books and articles.

An "annotated list of tests, questionnaires, and rating scales for the study of personality and conduct," comprising more than half the book, should prove useful for reference purposes.

STRATEGIC FACTORS IN BUSINESS CYCLES.

By John Maurice Clark. New York: National Bureau of Economic Research, 1934, 238 pp., \$1.50.

By thorough analysis of incomplete data now available, Dr. Clark has attempted to isolate what he terms "strategic business factors"—strategic because they seem to have a causal influence upon the business cycle and may be controlled. It is upon such research as this that our efforts to stabilize business and employment must be based.

PRACTICAL BUSINESS STATISTICS. By Frederick E. Croxton and Dudley J. Cowden. New York: Prentice-Hall, 1934, 529 pp., \$3.50.

This is a simple yet sufficiently comprehensive book, suitable for use as a text in business college, or for the business man who wants to know more about the practical uses of statistics. The book is free from mathematical detail and is enriched by much illustrative material.

Current Periodicals

PREPARED BY LINDA H. MORLEY, *Industrial Relations Counselors, Inc.*

EMPLOYEE REPRESENTATION

Collective bargaining agencies. *Employer Employee Relations*, Oct. 1, 1934, p. 3-4.

Points out the technique necessary to prepare the ground for installing employee representation plans.

Co-partnership and control. By L. URWICK. *Human Factor*, Nov., 1934, Vol. 8, p. 385-396.

Discusses some of the problems involved in the association of workers with the higher control of business. Management today is becoming scientific rather than political—a task of co-ordinating the contributions of experts rather than of compromising conflicting interests. The new, scientific type of administration demands specialized knowledge and intellectual detachment. Workers who possess such knowledge should not remain workers; and members appointed to Boards of Directors for the avowed purpose of representing the interests of a particular section are by definition the reverse of detached. The solution may come through representation of the workers on a second body, behind the Board, and standing in the same relation to it as the Houses of Parliament to the Cabinet—a body with wide powers of criticism and review, but no duties of actual administration.

JOB ANALYSIS

Analysis of occupations: a symposium. *Occupations, the Vocational Guidance Magazine*, June, 1934, Vol. 12, p. 1-85.

Contents: "Analysis of occupations": editorial foreword, by Morris S. Viteles. "Occupational studies," by Cleo Murtland. "Job analysis survey: its procedures and some of its results," by C. A.

Koepke. "Time and motion study: Techniques and their application to vocational guidance," by Lillian M. Gilbreth. "Analysis of skill," by Mildred Fairchild. "Job psychograph in job analysis," by Jay L. Otis and Kingsley R. Smith. "Intelligence and occupational adjustment," by Douglas Fryer and E. J. Sparling. "Occupational analysis for vocational guidance: methods used by the National Institute of Industrial Psychology," by M. Boole Stott and M. Birkinshaw. "Job analysis in industry," by Richard Stephen Uhrbrock. "Classifying occupations for instructional purposes," by W. W. Charters. "New aspects of job analysis," by Franziska Baumgarten.

Paper box industry. By ROBERT T. HILL. *Employment Outlook* (New York State Employment Service), Oct., 24, 1934, Vol. 1, p. 16-24.

An analysis of the industry from the point of view of its employment potentialities. An industrial analysis is given first, including a breakdown on the basis of products, location of factories and workers. Charts show size of establishments and numbers of workers, national employment, seasonal variation, seasonal variation in New York state, seasonal variation in Rochester. The occupations within each branch of the industry are listed and the extent to which the workers are organized is estimated. The report concludes with general comment and employment forecast for this group of industries.

Silk industry. *Industry Report* (Retail Credit Company), Nov., 1934, Vol. 9, p. 113-123.

A general survey of the industry from the point of view of industrial health and safety. Provides occupational descriptions for the industry.

Woolen industry. *Industry Report* (Retail Credit Company), Oct., 1934, Vol. 9, p. 101-111.

This report covers: statistical data showing the extent and scope of the industry; conditions in the plants; processes of manufacture for both woolsens and worsteds; potential health hazards; a classification and index of jobs, with job descriptions.

NATIONAL INDUSTRIAL RECOVERY ADMINISTRATION

Labor boards: the new mechanisms for industrial relations. By JOHN A. FITCH. *Survey Graphic*, Nov., 1934, Vol. 23, p. 533.

There are now twice as many agencies for handling industrial disputes as there were when unbroken production was a war-time necessity. The interpretation of Section 7-a of the Recovery Act, the complex machinery set up to fortify labor's right to organize and bargain collectively are here described by an expert in labor relations.

Majority rule in labor relations. By National Industrial Conference Board, Inc. *Conference Board Service Letter*, Sept. 30, 1934, Vol. 7, p. 65-68.

An analysis of cases and decisions made by the National Labor Relations Board, particularly those connected with the Houde case.

New deal that women want. By HELENA HILL WEED. *Current History*, Nov., 1934, Vol. 41, p. 179-183.

Critical survey of the status of women under the various relief schemes now in effect. The author points out the various inequalities in treatment which exist and the inadequate measures taken to improve the situation.

PENSIONS

Experience under state old-age pension acts in 1933. By FLORENCE E. PARKER. *Monthly Labor Review*, Aug., 1934, Vol. 39, p. 255-272.

More than 115,000 old people were being cared for by public pension systems in sixteen States and one Territory at the end of 1933, the pensions in that year amounting to almost \$26,000,000. While the pension idea is spreading—12 new laws were passed in 1933—the actual number of beneficiaries in several States is being held stationary or even restricted, due to financial difficulties. The limited funds available have resulted in very small awards in some cases.

SAFETY

Those accident addicts. By W. V. BINGHAM. *National Safety News*, Oct., 1934, Vol. 30, p. 47.

Most of those who haunt the dispensary are curable but a few will have to be isolated.

UNEMPLOYMENT INSURANCE

Recent developments in unemployment insurance in Belgium. By GLADYS FRIEDMAN. *Personnel*, Nov., 1934, Vol. 11, p. 51-64.

Detailed description of present operation of the plan, preceded by a brief historical summary.

Questions on unemployment insurance. By T. H. A. TIEDEMANN. *Personnel*, Nov., 1934, Vol. 11, p. 48-50.

Nineteen pertinent problems for the consideration of the industrialist.

WAGES

Wage and salary administration in the American Rolling Mill Company. By C. H. MURRAY. *Personnel*, Nov., 1934, Vol. 11, p. 33-48.

Detailed description of the procedure used by this company.

Union and non-union wages and hours in the street railway industry. EMERSON P. SCHMIDT. *Journal of Political Economy*, Oct., 1934, Vol. 42, p. 654-659.

An inductive study of the influence of a specific union on wages and hours.

WORKMEN'S COMPENSATION

Status of relief workers under workmen's compensation laws. *Monthly Labor Review*, Sept., 1934, Vol. 34, p. 660-671.

The problem of accident compensation for persons injured while engaged on work relief projects has arisen in many States. There has been no uniformity in the rulings of the workmen's compensation commissions or in court decisions on this point. However, the majority of rulings and decisions have excluded such persons from the benefits of the compensation laws.

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AN ANNOUNCEMENT

IN THE belief that the present disturbed state of employee-employer relations is leading to a growing recognition of the importance of personnel research, and to an increasing demand for skilled industrial relations consultants, the editors of the Personnel Journal have decided on an expansion which they hope will enable the Journal to fit into a somewhat larger field. Through this expansion, the editors of the Journal will endeavor to render better service to each group of present readers. Neither the business nor the educational field will be neglected. Problems of the young man seeking a career will be discussed by competent authorities, as will the problems of industrial executives, vocational guidance officers in colleges, and personnel managers in business.

The new policies will include:

1. Appearance of the Journal monthly (except in July and August), instead of every two months. We are pleased to state that the 10 issues will be sent for the same annual subscription as the six issues in the past, and believe that this increase in frequency of the Journal's appearance will enable its readers to keep more closely in touch with present rapid developments in personnel practice.

2. Continuance of all present features of the Journal. The editors are now actively seeking out all research work in psychology, medicine, economics and engineering, which affects human relations in industry. A special effort is being made to secure good material from research units and colleges.

3. Publication of prompt, up-to-date reports on new personnel ideas and plans developed by business and industry. These reports will be written clearly, and will be presented in such a way as to enable readers to apply them immediately to their own personnel problems.

4. Establishment in the near future of a question and answer and reader service department. Questions on personnel problems, research, books, etc., will be answered. The Personnel Journal and the Personnel Research Federation, of which it is the official publication, would appreciate suggestions from reader on the functioning of this department. How can the Journal be of greater service?

5. Encouragement of letters to the editor, on subjects of interest to business leaders, research workers, industrial psychologists, and other readers. Comment on articles in the Journal, whether agreeing or disagreeing is invited.

6. Publication, the editors hope, of more news about people in the personnel field. Readers, whether they be in business organizations, personnel clubs, universities, or societies, are invited to send the editor items about themselves and others. The editors particularly desire to hear of formation of new personnel clubs, promotions of personnel men, new connections, new books on their way to press, new researches completed, college personnel plans, conferences, new personnel departments established, etc., etc.

Other plans of the Journal and of the Personnel Research Federation for further enlargement of scope will be announced soon.

FOREMAN AND WORKER

A NEW point of view is always refreshing. With all the talk there has been of late regarding the place of the foreman under collective bargaining systems, and the necessity of training him so that he functions properly under the new conditions of today, it is interesting to find someone who as a result of intensive study concludes that foreman training is not the answer. Mr Dickson of the Western Electric Company, reports on p. 324 of this issue his study of the behavior of a group of workers, and what their front line supervisors did about the situation. He concludes that the foreman is on the spot, and it logically follows that there is not much use in training a man in such an embarrassing position. The thing to do is to get him out of that position.

He is the representative of management. "The logic of management assumes that employees will act or should act in certain ways and the supervisor is supposed to see that they do." The front line supervisor or foreman (i.e. the man directly above the workmen) has the job of seeing that employees carry out the orders and rules of those higher up in the organization. But suppose, as is often the case, the employees do not regard the orders and rules as suitable or sensible or necessary.

What is the supervisor to do? If he "cracks down" or "drives," his position becomes intolerable to everyone. He may attempt to sell the employees on the value and necessity of the orders. But in actual fact he often does not regard them as valuable or sensible—they may or may not be. Seldom does management consider it necessary to sell supervisors. So, within reasonable limits which become adjusted in the course of time, the supervisor "goes along with the boys."

The present situation exists because management tells the foreman what the workers should do. It would be vastly improved if rôles were reversed—if the foreman told the management what workers should do. The supervisor is the only man in daily contact with the men. He knows their prejudices, fears and motivations. He knows all the ways they can and do beat the system. At present, he is *part of* management but has no *part in* management. Give him a part in management on matters that are within the scope of his knowledge. If he makes a set of rules and gives out orders of his own making, he will see that they are carried out.

A man who was once in charge of a foreman training class, to find the points on which the men needed training, had them list all the things for which they were bawled out by the superintendent. They stopped when they had listed 298. When it came to training them to avoid these faults, they refused to be trained on the ground that if they were perfect in these matters, the superintendent would find other reasons for bawling them out. As far as they were concerned, they had got used to these 298 reasons, had their alibis all made up and didn't want to have the bother of thinking up new alibis.

If the foreman is to take part in management—in fact if he is to be able to do the industrial relations job that modern conditions require—he should be relieved of much of his present unnecessary duties. The average supervisor is a combination policeman, clerk, messenger, teacher, first-aid specialist and butler. A thorough job analysis and motion study would show that much of this is not at all necessary, and that much of it properly belongs in a central planning department anyway. Give him regular clean cut specifications for his job, including managerial duties, and he will come through without a lot of fancy training.

Of equal importance—perhaps more important for industrial relations—is the planning of the supervisory hierarchy. Many plants are top heavy with a line of section bosses, assistant foremen, foremen, general foremen, assistant superintendents, superintendents, etc. What chance has an idea from a man at the bottom to get a hearing? What incentive to originality of thought has the front line supervisor when he

knows that any recommendation he makes will be picked over and tossed about by a hierarchy of self-important men, any one of whom is likely to claim credit for it anyway.

With thorough job analyses and careful planning, these hierarchies can be done away with. They are a relic of feudalism and totally unsuited to modern industrial organization, because of their rigid inflexibility. It may perhaps sound like an exaggeration, but there seems no good reason why most of the front line supervisors should not report directly to the plant manager's office. Whether the organization goes to this degree of unorthodoxy or not, it is certain that situations such as that described by Mr. Dickson can be cleared up only if the front line supervisor takes an actual part in management, and that there is no hope of his doing so under a system whereby he is overseen by a rigid hierarchy.

Federation 1935 Conference Report

"Greater Harmony and Security" was the central theme for the Thirteenth Annual Conference of the Personnel Research Federation at the Hotel Astor, New York City, Jan. 24 and 25. The conference provided a means for exchange of ideas among some of the best minds which are grasping for the answers to the seemingly unanswerable questions of the present industrial age.

A surprisingly large number of answers were found. More will be found at succeeding conferences, planned for the near future. The conference took up the knotty problems of job insurance, employment stabilization, joint negotiations, improving supervision, equitable wage rates, and occupational adjustment.

A notable characteristic of the discussions was the tendency to branch out into new thought on employer-employee relations. Those participating appeared to realize they must do more than exchange experiences, however useful that might be. They recognized that in addition to covering already explored ground, they must also branch out into explorations of new territory.

In a sense, much of the conference might be compared to an exploration. The old territory, the old methods, had not proved altogether satisfactory. Something new in industrial relations must be found.

The report of the conference proceedings, which follows, is divided into three parts: Joint Negotiations; Unemployment Insurance; and Research Reports. In addition, two of the conference papers are presented as separate articles in this issue. They are "Overcoming Time-Study Fear" by Charles E. Bedaux, and a discussion of group behavior in a shop department by W. J. Dickson.

JOINT NEGOTIATIONS

INCREASED harmony in industrial relations through the various forms of joint negotiations with employees was discussed in an informal meeting on Thursday afternoon of the conference.

More than one hundred representatives of industrial and business com-

panies and many professors with experience in industrial research were present.

Ernest P. Goodrich consulting engineer with many years experience in negotiating with employees in this country and many other parts of the world was the Chairman. Discussers

included T. H. A. Tiedemann, Director, Industrial Relations Counselors; Rex B. Hersey of the University of Pennsylvania and the Pennsylvania Railway; W. C. Colby, Manager of Personnel, Standard Oil Company of New Jersey; H. E. Nesbitt, Personnel Director, Consolidated Gas Company of New York; and D. F. G. Eliot, Personnel Director, Western Electric Company.

Spencer Miller told of the progress during the past year in the development of Collective Bargaining with affiliated Unions.

He said that a survey he had made covering nearly half of all union workers showed that 1000 national or regional agreements, and 11,000 local agreements had been signed between unions and employers in 1934. He estimated that altogether three times as many agreements were really signed in the United States.

In discussion he laid down three conditions essential to true collective bargaining: (1) Absolutely impartial elections by secret ballot; (2) Right of appeal to Joint Committee by employees claiming discrimination of any kind; (3) Right of employee's organization to be represented by outside counsel or agent when they so desire.

It was recognized that many of the difficulties which arise in joint negotiations with employees are due to misunderstanding of the policies of a company.

Chairman Goodrich called upon the meeting to develop a set of means by which these unnecessary and irritating difficulties can be avoided.

The first thing decided was that a company should have a clearly stated, readily understandable, and unambiguous policy which it should set down in writing for the guidance of all its employees including the supervisory organization. Many companies get into difficulties because they fail to do this and try to operate with a loosely defined and variable set of inconsistent policies.

Given such a written policy it is necessary by various educational means to see that all company personnel read it and understand it. It was suggested that the basic written policy could be developed into a series of units for discussion in conference groups, particularly of supervisors.

A policy is implemented by rules and regulations for guiding the conduct of management representatives in all their dealings with employees, both on the factory floor and in conferences. It is necessary for a company constantly to see that these rules and regulations are lived up to. (See Dr. Lasswell's report on some of the causes of twisting of rules, elsewhere in this issue of the *PERSONNEL JOURNAL*.)

There was some discussion of the difficulty of transmitting a proper understanding of policy through all the lines of supervision to the employee. As a means of avoiding the difficulties in doing the job this way, the suggestion was made that a closer contact and better understanding might be obtained if management policy was interpreted to employees by an executive associate of the President. This method of elevating the position of personnel and industrial relations men

was, curiously enough, not generally approved by the meeting.

Assuming that employee representatives really bring to joint negotiating conferences the matters which are of prime interest to employees, careful review and analysis of proceedings of these conferences was recognized as the best way to obtain employee reaction to management policy and its manner of administration.

Should management assume that matters brought up by employee representatives really represent the matters in which employees are most interested?

The first reaction to this question was—this is a matter entirely between employees and their representatives and should be left to them to work out. It is none of Management's business. If an employee representative agrees to a management decision which the employees do not like, provision is made for referendum or recall. If he consistently fails to win favorable decisions for employees, they will not reelect him.

It was recognized however that in employee representative plans there is another side to this question. There are many reasons why employees, in sometimes important instances, do not take up matters with management through their representatives. It is not safe to neglect these cases. (On unionized properties this type of situation does not exist.)

It was thought that there is no sense these days in management shutting its eyes to possibilities. As one man put it "It is all very well to sit down and smoke a cigar with pleasure that

everything in the garden is lovely. But it is a good plan to make sure you are not sitting on a powder keg."

Viewed from this angle discussion brought out the following ways of getting a line on the real interests of employees: (a) by comparing matters brought up by representatives with independent recommendations made by supervisors and superintendents, (b) by noting the progress of election of representatives, (c) by the study and interpretation of matters brought up in joint conferences, and the way they are handled, (d) by periodic systematic interviews of the type developed in the Western Electric Company and reported in the *PERSONNEL JOURNAL*, February, 1930, and (e) by informal contacts with employees.

The use of stool pigeons, stooges and spotters was strongly and unanimously condemned. It was the opinion of the meeting that under no circumstances whatever, not even when it was suspected that there were "improper activities of organizations or individuals working along entirely unconstructive lines," should management adopt such an unethical practice. Intelligent and fair use of the ways and means developed in the conference meeting were regarded as adequate to meet the needs of management in negotiating with its employees.

The following subjects for further research in 1935 were suggested:

- (1) The further development of conference methods specifically applied to the conduct of negotiating conferences between management and employee organizations, affiliated or

otherwise. (As a result of this recommendation the Personnel Research Federation has commenced a study of such conferences, how to analyse and interpret reports of them, and what can be done to anticipate and remedy difficulties that arise.)

(2) The effect of modern social and

industrial conditions on the foreman in his attitudes to the company and to employees.

(3) What changes should be made in the responsibilities he is given. (See editorial in this issue of the *PERSONNEL JOURNAL* for a statement on this question.

UNEMPLOYMENT INSURANCE

The session on unemployment insurance was presided over by Dr. Lyman Bryson of Columbia University. Speakers included Roderic Olzendam of the Metropolitan Life Insurance Company, and Professor E. W. Bakke of Yale. Speakers at the luncheon meeting were Paul U. Kellogg, editor of the *Survey-Graphic*; Frank L. Weil, counsel to the Merchants Committee on Unemployment Reserves; and Thomas H. Eliot, associate solicitor of the United States Department of Labor. Dr. Harvey N. Davis, president of Stevens Institute of Technology, presided at the luncheon and introduced the speakers.

Dr. Olzendam undertook the difficult task of extracting from the mass of conflicting opinion on unemployment insurance the points on which there was general agreement. The eight points he selected were arrived at in consultation with Bryce Stewart, Director of Research of Industrial Relations Counsellors; Dr. Herman Feldman, chairman of the New Hampshire Commission on Unemployment Reserves; and Glenn A. Bowers, president of Industrial Reserves Corporation of America.

The points were:

1. The necessity for a compulsory

rather than a voluntary or optional plan.

2. The desirability of nationwide coverage, with minimum standards federally established.
3. These standards to provide a definite system of benefits as a first line of defense against the hazards of lay-off, but should not attempt complete protection against unemployment.
4. Relief, the indispensable second line of defense against the hazards of protracted unemployment, must be provided apart from the unemployment insurance plan, although the two should articulate.
5. There should be federal control of investment of reserves.
6. The states should administer collections and distribution of benefits.
7. A system of public employment exchanges is an indispensable adjunct of a workable plan of unemployment insurance.
8. No benefits are to be paid to employees on strike.

Dr. Olzendam then proceeded to compare each of these eight points with proposals of the President's Committee on Economic Security and

provisions of the Wagner-Lewis Bill. Taking up his first two points, the necessity for a compulsory plan, and the desirability of nationwide coverage and standards, Dr. Olzendam continued in part:

"The Wagner-Lewis proposal, as far as I have had the opportunity to analyze it, contains both compulsory and voluntary or optional features. It might be well to consider the compulsory features first:

"Under this bill, the federal government collects annually from every employer of four or more persons an excise tax equal to three percent of his total payroll. This is not three percent of the payroll of eligible employees, but three percent of the total payroll.

RELATED TO RECOVERY

"It was apparently the desire of the committee to relate the imposition of the total tax to the progress of recovery and, therefore, the bill provides that if the federal reserve board's adjusted index of industrial production for the year ending September 30, 1935 is less than 85 per cent of its average for the years 1923-1925, employers will pay an amount equal to one percent of their total payrolls commencing January 1, 1936. If, however, recovery has progressed sufficiently by September 30, 1935, so that this index is between 85 and 94 percent of the earlier average, then the tax shall be 2 percent of the employers payroll, but if our recovery should be such as to place the index at a point higher than 94 percent, then the tax would be the full 3 percent.

"The act provides that any em-

ployer may receive credit against the 3 percent tax of the amount of his contribution to any state unemployment fund up to 90 percent of the federal tax, provided that the Secretary of Labor has made a finding of fact and certified to the Secretary of Treasury that:

"1. The state has accepted the provisions of the Wagner-Peyser Act and has created a state employment service in accordance with this act.

"2. The payment of all unemployment compensation in the state is made through the public employment offices set up in accordance with this act.

"3. The state has deposited the money received as contributions towards its unemployment compensation plan with an Unemployment Trust Fund to be established in the United States Treasury.

"4. None of the money collected by the State shall be used for any other purposes than the payment of unemployment compensation.

"5. The state plan does not require as a condition for benefit that a person accept employment in a vacancy due to a strike, lockout or trade dispute, or if the wages, hours, and other conditions of work are less favorable to the employee than those prevailing for similar work in the locality and if acceptance of such employment would either require the

employee to join a company union or to refrain from joining a trade union.

- "6. The state plan makes provision for modification by the legislature at will.

"When a state has finally drafted its plan, such plan must be submitted to the Secretary of Labor for final approval.

"On the optional side of the ledger we find that the various states have considerable leeway in other matters. The question of whether or not employees shall contribute to the state plan is open. Other matters on which there is leeway for the states to act are in respect to the amount and duration of benefits and the length of the waiting period. None of these points are covered in the Wagner-Lewis bill. In order to guide the states, however, the actuaries of the President's Committee on Economic Security have drawn up a table showing the amount of protection that can be extended for various rates of contributions and various lengths of waiting period. With a contribution of 3 percent and a waiting period of four weeks it is not feasible, says the report, for the worker to receive as compensation more than 50 percent of his average wage with a maximum of \$15 a week or a longer period than 15 weeks in a year. Another option has to do with the class of workers to be excluded from the plan. Still another point on which the people of the various states have a freedom of choice is whether or not the funds should be pooled or segregated.

Turning to the fourth point, dealing with relief, etc., Dr. Olzendam pointed

out that the President's committee had called attention to the necessity for including those now unemployed in the program of economic security. He quoted the committee's statement that the federal government's major contribution should be employment "*assurance*," through stimulation of private employment and provision of public employment for able bodied workers laid off by industry.

WORK PREFERRED

The committee, Dr. Olzendam said, concluded work was preferable to other forms of relief, and advocated work relief for those still unemployed at the end of the contractual unemployment compensation period. Under the Buchanan Relief Bill, he pointed out, unemployables and those on the unemployable fringe will revert for care to the states.

Elaborating on the fifth point, "there should be federal control of investment of reserves," Dr. Olzendam continued:

"This has definitely been provided for in the Wagner-Lewis Bill, under which the contributions of all employers will be deposited in an Unemployment Trust Fund to be managed by the Secretary of the Treasury.

"The President's committee is for federal administration of all reserve funds. The report states that the credit policy of the government is an important element in attaining economic stability and the investment and liquidation of the unemployment funds should, therefore, be coordinated with this credit policy.

"It is maintained that if these funds are split up for management in the 48

states the efforts of the federal government to maintain stability might be nullified. This would be particularly true, says the report of the committee, if at a given time the federal government is trying to prevent a depression.

"The throwing of the reserve funds on the markets by the states would further complicate an already difficult situation. To quote the report again,

'Intelligently handled, unemployment reserve funds can be made an important factor in preventing a depression; but utilization for this purpose is possible only if their investment and liquidation is within the control of the United States Treasury. We deem this an absolute essential if unemployment compensation is to accomplish the purposes for which it is designed.'

"On the other hand, there are those who feel that the matter of the management of the funds and their liquidation would be more safely entrusted to responsible persons in the various states."

Dr. Olzendam next discussed the sixth point, having to do with desirability of state administration of collections and distribution of benefits, and the seventh, to the effect that public employment exchanges are indispensable adjuncts to a workable plan of unemployment compensation.

Under the Wagner-Lewis Bill, he said, the social insurance board it creates would have available for distribution to the states for administrative expenses, \$4,000,000 for the fiscal year ending June 30, 1936, and \$49,000,000 each year thereafter. To get its share of these sums, Dr. Olzendam said, each state must fulfill the following conditions:

1. Every person who is employed

in the administration of the state unemployment compensation plan must be selected on a basis of merit under rules approved by the Board.

2. Administrative regulations and practices must assure reasonable and full payment of compensation when due.
3. Benefit shall be paid as a matter of *right* and all persons having claim for compensation shall be given a fair hearing.
4. All benefits must be paid through the employment exchanges of the state set up under the Wagner-Peyser Act of 1933.
5. All money raised by contributions from employers and employees under a state law, must be deposited in the federal unemployment trust fund and used only for the payment of benefits.
6. The state administrative agency must make complete reports to the board on the operation of the law.

CLARIFICATION NEEDED

From outlining the points on which there was general agreement, Dr. Olzendam proceeded to a discussion of seven problems which the experts believed called for greater clarification. These were:

1. The nature and extent of hazards to be protected against.
2. Scope and coverage of the plan.
3. Spread of the risk.
4. Employee contributions.
5. Assuring adequacy of protection.
6. Administration of unemployment compensation.

7. Value of unemployment insurance in increasing the sense of security.

Discussing the second point—scope and coverage—Dr. Olzendam said the Wagner-Lewis Bill, as drafted imposed the tax “on all occupations including agricultural workers and domestic servants provided there are four or more people employed, excepting only governmental, state and municipal employees.”

“These classes are generally excluded from the systems abroad,” he said “In this connection it seems that the states will be allowed to specify a maximum wage income above which a worker will not be eligible for protection under the state plan. It would also appear, although I am not certain about this, that a state might exclude from its plan such categories of workers as agricultural workers, domestic servants, etc., and still obtain the approval of the Secretary of Labor.

“A very interesting point arises in connection with workers in interstate commerce. Individual states have no power to legislate in regard to these workers. Consequently it is assumed that all state plans will exclude them. There is nothing in the Wagner-Lewis bill which takes them into consideration and just how they will be covered does not seem clear to me as far as I have been able to go in looking over the act.

“The question of spreading the risk is also up to the individual states as I have already indicated. Whether the state shall have a pooled fund or a segregated reserve fund, or whether it shall adopt a system of employment guarantees are matters which it must

decide. The Wagner-Lewis bill, however, seems to allow equal opportunity for any of these measures.”

DR. BAKKE'S CONCLUSIONS

Dr. Bakke related first hand experiences in living among the unemployed of Greenwich and Manchester, England, in discussing the effect on self respect and morale among British workers, and the question whether they rely on benefits instead of trying to find employment.

Only eight percent of the unemployed, he concluded, are found loafing on the streets, and many of these are from the very young and very old groups of workers. Most of the others were looking for work. Eighty percent of British workers find jobs through their own efforts rather than through labor exchanges.

Eagerness of men to work, he said, was further evidenced by the large numbers who worked without pay in community gardens and other projects.

Dr. Bakke concluded also:

That if the dole rally does approximate normal earnings, as some seem to think, this fact is an indictment of the wage standard.

That those satisfied with the dole come from the very dregs of the labor world.

That men malingers not because of unemployment insurance but because of the crumbling of economic conditions.

That the dole has not made paupers but has kept men from becoming paupers.

That spongers, rich or poor, need not be considered in a plan of social

insurance, but that it should be established in behalf of the vast mass of workers who are industrious.

That when work is refused, it is often because of the temporary nature of the job or extremely low wages offered.

Those who would like a full report of Dr. Bakke's investigation are referred to his recent book, "The Unemployed Man."

Mr. Kellogg, speaking at the luncheon meeting, expressed the belief that a 1 percent assessment to go into a general pool was sound. The weakness of the proposed act, he said, was that it guaranteed no nationwide minimum benefit. Fifty-four percent of those ordinarily unemployed at any given time would be ineligible for benefits, he said.

"We should go further than England, and not set lower benefits," he declared. "There should be higher benefits for married men and less than a four weeks waiting period."

EMPLOYEE CONTRIBUTIONS URGED

Frank L. Weil, counsel to the Merchants' Committee on Unemployment Reserves, said in part:

"Unemployment insurance will fail in its objective of adequately protecting the worker if, as in the Wisconsin plan, only the employer contributes to reserve funds.

"Democratic principles of distribution of risk, sound economic thinking, and the lessons of European experience demand a pooling of contributions from the employe, the employer, and government sources, providing a wide coverage available for the worker.

"Advocates of contribution solely

by the employer, as recommended in the Wisconsin plan, believe in punishing the employer for the alleged crime of unemployment more than they believe in helping the worker, who suffers from it.

"The employer may be able to reduce casual unemployment. He cannot control seasonal, technological or cyclical unemployment. It is a fallacy to think he can.

"There are two approaches to unemployment, prevention and relief. All European plans aim solely at relief. In this country alone have the two purposes been confused. By making relief sufficiently burdensome, it is believed prevention will result. This might happen if prevention were within the control of those burdened.

Employer and the worker both should contribute. The fund will be larger, the burden will be shared. The State should at least pay the costs of administration. If the Federal Government also contributes it can bring about uniformity and greatly strengthen the plan.

"European experience in nine countries for periods from eight to twenty-four years has been based on contributions by employer and worker, and in six countries on the contribution also of the State. The plans are functioning in all these countries. In England, after extended study based on twenty years of experience, the plans have been reenacted substantially unchanged.

"Many economists and many employers support contributions solely by the employer with funds held in individual plant or company reserves believing thereby that the burden will

fall most heavily on the irregular employer of labor.

"They overlook the fact that the consequence of unemployment, reduced purchasing power, falls on good and bad employers alike. They fail to see that recognition of difference between good and bad employment records can be embodied just as successfully in plans based on multiple contributions and State pooled funds or partially pooled funds, and that greater protection to the worker will result from larger and more stable funds which will make itself felt in better sustained purchasing power.

"The worker should not work without pay. Neither should he receive benefits for which he has not paid at least in part. The principle of the payment of benefits should not be charity but rather should be assistance bought and paid for on a business basis by service and contributions. Unemployment insurance without contribution by the worker is a dole. Failure of the worker to contribute is an evasion of responsibility. Contribution by the worker will give him a pride of part authorship and part ownership. His contribution sustains his morale. His participation insures additional supervision of the fund and its administration and aids in maintaining its integrity and preventing abuse.

"There is substantial sentiment against contribution to the fund by the State. This is largely due to the precarious condition of State finances. There is, however, much support for payment of the costs of administration by the State. This would insure that all funds contributed by employers or

employees both would be available without deduction for the payment of benefits. They would constitute a trust fund available for use in emergency entirely for the benefit of those who created them.

"Contribution by the National Government would have to be based on a nation-wide plan bringing about uniformity as nearly as possible. This is the ideal approach. But there is grave doubt of the constitutionality of any Federal legislation based on a compulsory plan. The same result, however, could be accomplished by a Federal subsidy, together with a tax on payrolls with credit allowed for contributions to approved State funds. Uniformity would have the great advantage of eliminating or at least minimizing individual differences between States and the consequent migration of industry. Labor would receive protection in all forty-eight States and would not migrate merely to seek the benefit of more favorable consideration of one State as against another."

Mr. Eliot, discussed the proposals sponsored by the President's Committee on Economic Security.

ADMINISTRATION OF UNEMPLOYMENT INSURANCE

Following two stirring general sessions of the entire Personnel Research Federation Conference in which the details of the Wagner-Lewis Bill were examined, one hundred representatives of industry and social and governmental agencies sought by discussion to forecast the most effective kind of administrative methods to be employed.

The presiding officer of the discussion was Owen E. Pence, National Council, Y.M.C.A., who has appeared before legislative committees in Washington and Albany to represent the views of his organization on the problem. With him were associated Dr. Millicent Pond, Scovill Manufacturing Company, Dr. E. Wight Bakke, Yale Institute of Human Relations, Dr. Paul Kellogg, Editor of the Survey, and Professor Francis S. Tyson University of Pittsburg. Among the participants in discussion were Mrs. August Belmont of New York City, Mrs. John B. Andrews of the American Association for Labor Legislation, and Director Edward N. Jones of the Bureau of Labor and Industry of Pennsylvania.

The conference viewed the present unemployment problem as presenting insecurities to the worker and to the whole social order. The group recognized the essential unity of purpose between plans for unemployment insurance whose benefits lie largely in the future, and relief measures directed toward present distress. They also recognized the essentially different type of administrative and financial structure necessary for each. Furthermore the central function of Employment Exchanges in the actual operation of both work relief and benefit systems brings the two aspects together so far as clients served and service personnel are concerned.

Specific administrative processes were reviewed in the light of experience abroad and in America.

These processes were as follows:

(1) A "willingness to work" test to prevent malingering. Experience in England indicates that no satisfactory device has been developed so far. In England the matter is not regarded as of so much importance, but reports from Germany show that this is a most serious problem.

(2) The influence upon costs of the various sources of contribution was considered slight. This was surprising for it has been thought that any system providing employee contributions would be very expensive.

(3) The "stamp book" method of routine individualized administration provides an authentic continuous record satisfactory to both worker and employer.

(4) Labor's interest in unemployment insurance plans was carefully considered. It was seen that labor standards and working conditions, minimum wage as related to rate of contributions, and the fair adjustment of cases of "misconduct" and pressure to accept work in violation of established wage standards necessitate influential participation by labor representatives in administrative processes.

(5) The setting up and maintenance of business like methods and proper standards of benefits and quality of administrative personnel were considered of central importance.

At adjournment it was suggested that one year hence all would like an opportunity to discuss the matter again in the light of a year's greater experience and knowledge.

RESEARCH REPORTS

Important lessons from the Adjustment Service, the project under which 12,614 depression victims in New York City were advised on their aptitudes, were discussed by Garret L. Bergen of the N. Y. State Employment Service in the recent Personnel Research Federation conference. Mr. Bergen described methods of "Getting Information about Individuals."

He stressed the importance of establishing rapport between examiner and examinee.

"If a person is mentally disturbed or emotionally upset," he said, "tests will not provide an accurate measurement of his ability.

"This consideration is not nearly so important in school testing, since the barrage of tests to which students in many modern schools have been exposed by embryonic PHD's has rendered them 'test conscious.' The Adjustment Service situation differed appreciably, as most of the clients were unemployed adults who had been away from the school situation from one to 40 years."

Pointing out that the major responsibility for establishment of rapport rested with the counselor, who decided whether tests were necessary for a given client, then selected the tests for the client, and later discussed the results with him. Mr. Bergen quoted from the "Manual of Counselors' Procedure," as follows:

"Since data obtained from a tense or indifferent examinee are unreliable, the counselor removes any fear he may have of the results. The counselor accepts full responsibility for 'gaining rapport' at this stage. He describes

the kinds of tests the client is likely to encounter in the examining room. He explains that the tests are only one part of the total process and will enable the counselor to see certain aspects of his problem which cannot be approached in any other way. He makes clear to the client that there is no question of 'passing' any of these tests. He may even suggest to the client that he is likely to enjoy taking them. The counselor does not schedule tests unless he is reasonably sure that the client is in a coöperative state of mind."

In summarizing Mr. Bergen said: "First, we cannot overestimate the importance of the 'rapport' element, in testing adults in general.

"Second, the development of sound methods of establishing this rapport is a subject requiring further research.

"Third, we have not yet recognized, how much the degree of 'rapport' affects test results.

"I should like to propose that subjective observation of a client's behavior during the tests should be developed to the point where it contributes a significant supplement to the test score.

"No test is so accurate that the method in which the client reacts to it can be ignored. Counselors found it helpful to know how clients reacted to tests—whether they approached a test in a workmanlike way, or in a groping, trial and error fashion; whether they were unconscious of other people in the room, or disturbed when they were watched by the examiners. Every behavior reaction has potential

significance, so should be noted. Often the quality of a client's work on a test was not reflected by his raw score. In some cases, a loose fit in a mechanical puzzle may be the correct one, but at the same time it may be too loose in the eyes of a workman accustomed to extreme accuracy and the time factor may not accurately measure ability.

"Data on observed test behavior was useful to the counselor, particularly in spotlighting those cases in which the test results were likely to be unreliable. In many cases examiners called attention to the desirability of a psychiatric interview, the need for which had been unnoticed. Occasionally, the psychiatrists encountered cases in which the comments of the examiners furnished significant leads for the psychiatric interview.

"I should like to see included in the manual for administration of every test a section on significant behavior which should be looked for by the examiner. Perhaps the final step in the training of an examiner should include instruction in this subject by a clinical psychologist or psychiatrist.

"Our next step was to compare the score of the client with averages for people in general to enable comparison to be made with the population at large.

"Since the Adjustment Service used, for the most part, tests which had been studied at the University of Minnesota Employment Stabilization Research Institute, the averages developed by that Institute were also used. These norms have as their base a normal occupational and age selection

for Minneapolis, St. Paul, and Duluth, and for this reason may not be entirely adequate for New York City.

"I should like to emphasize to you the need for New York City and other communities to develop 'local' adult averages using a 'standard sample' of the population corrected for age and occupational composition to conform with the census distribution. For comparative purposes, the methods used in developing these averages should be identical with those described by the Employment Stabilization Research Institute in 'A Manual of Selected Occupational Tests.' The sponsorship of such research would be a worth-while outlet for foundation funds.

"Apart from tests, we explored the possible contributions to individual diagnosis of personal, occupational, educational and avocational backgrounds. All of us in this field have stressed the usefulness of these data, but I question whether we have probed successfully the methods for obtaining, and the usefulness of such items as, reasons for leaving past jobs, a client's own statements of ambitions, records of study pursued by the individual since leaving school, and the pattern of his interests apart from work.

Mr. Bergen concluded "the main thought which I should like to leave with you is this. If you have anything to do with the establishment of a service equipped with testing and other diagnostic facilities, do all in your power to equip it with a research division. Economic, as well as scientific, waste results from the use of

technical devices unaccompanied by technical investigations into their reliability and actual usefulness."

At the Friday afternoon session three papers were read relating to industrial studies conducted at the Western Electric Company in collaboration with members of the Industrial Research Group at the Harvard Graduate School of Business Administration.

The first paper, "Actual Behavior in a Shop," by W. J. Dickson, is published in this issue.

The second paper, "Actual Behavior in an Experimental Situation," by T. N. Whitehead, described the application of sociological and statistical methods to the study of a small experimental group of industrial workers. In this situation, there was a high degree of collaboration between employee and employee, and between the employees and management. A close study of the output of this group, showed that the members influenced each other's work speed to a very significant degree. This influence varied greatly from time to time, and

depended on the social routines, customs and common attitudes which formed within the group. Output was unaffected by changes of physical circumstance (temperature, humidity, working hours, arrangement of rest pauses, etc.) but changes in their own social organization had pronounced effects on employees and their working rate.

The third paper, "The Determinants of Behavior in These Two Situations," by F. J. Roethlisberger, presented an interpretation of the differences in behavior found in each of the above groups on the basis of differences in the human situations which each group reflected.

The conclusion was reached that in the disparity between the technical organization of a company on one hand and in the social organization of the worker on the other there exists a precondition for unbalance.

Professor Elton Mayo concluded the meeting by showing the implications of these findings for industrial management.

Intelligence Tests in Industry

BY DOUGLAS FRYER, *New York University*

Inquiry shows few business concerns use general intelligence tests for purposes of occupational adjustment. The decline in industrial use during the depression is not greater than would be expected

IT IS some years now since the industrial psychologist dreamed the dream that there could be exactness of adjustment of the human being in his occupational environment. It was felt that the mental qualifications of the worker could be fitted into the requirements of the job, and that in the development of such a technique, applied psychology had an important scientific contribution to make to industrial welfare and efficiency.

Industrial research, from this point of view, set a rapid pace during the years following the World War. Was the pace maintained? What is the situation today?

A survey has been made of the use of intelligence tests during the last sixteen years by commercial and industrial concerns in the United States. These data might be regarded as an indication of their value as viewed by the practical-minded business man. If an applied technique has practical value it will be used—that is, if it is understood, and is profitable to the user. Applied methods may be valuable but not used because they are too complicated for practical purposes, or they may be valuable but be too exact for the purposes of business, which

runs upon the principle of adopting only methods which show fairly immediate gain. The question answered here is purely a factual one of uses made of general intelligence tests by industry and business during recent years.

The first task was to estimate the number of firms who were users, or had used intelligence tests. A list of business concerns was prepared to include: those known by industrial psychologists to have used intelligence tests, and those from whom research with intelligence tests had been reported, particularly in publications. Thus, the list was limited to firms having shown an active interest in, and were the most likely users of, intelligence tests.

This preliminary survey listed 245 firms, and it is estimated that possibly 300 commercial and industrial firms in the United States have been users of intelligence tests during the last sixteen years. This would seem to be a conservative estimate.

In addition to the use by industrial and commercial firms, themselves, is the work of various social and educational agencies which furnish test scores to industrial firms. These agencies increase considerably the use

made by industry of test results. The uses spoken of here are limited to industry and business and should not be confused with the uses of mental measures for guidance and adjustment purposes in the abnormal and educational fields.

The list of users of intelligence tests may be criticized as more representative of New York City than of the country-wide situation. The number of 54 firms for New York, 21 for Chicago, and 9 for Philadelphia suggests that this might be true, but the grand total may be taken as a fair indication of the industrial use of intelligence tests.

HOW MANY ARE USING INTELLIGENCE TESTS NOW?

An attempt was made to answer this question by a study of the 245 firms included in the list of users. A survey of 191 firms, outside of Greater New York City, was made by correspondence. A personal visit was made to each of 49 firms in greater New York City, and information requested of any intelligence testing performed by the firm. There were 105 replies from the 191 firms outside of New York City. The results are shown in Table 1.

Fourteen per cent of the firms included in the total list as having experience with intelligence tests now have a regular general intelligence testing program. The per cent is higher (20 per cent) for New York City than for the country-wide firms (11 per cent). This may be due to three causes: (1) a possible relatively progressive character of New York firms, (2) location of head offices in New

York City of country-wide firms, and (3) the less exact method of assembling the list and collecting data in the country-wide survey. Eighty-six firms in the country-wide list did not answer the request for information, which may mean that persons now in charge of personnel activities in these firms had little interest in tests or no knowledge of past uses.

Seven per cent of the country firms and 13 per cent of the New York City firms have had a testing program in the past but do not now have one. This makes a total of 15 per cent of the

TABLE 1

	COUNTRY- WIDE	NEW YORK CITY	TOTAL
Number on which information obtained.....	105	49	153
Use tests now.....	12	10	22
Have used tests in past years.....	7	7	14
Interested but do not use now.....	21	0	21

list, or 36 firms, who have installed general intelligence tests as a more or less permanent part of the personnel procedure during the years following the War. It may be surmised that economic reasons caused the discontinuance of intelligence testing programs.

Eighty-five per cent of those included in the original list of users do not now have, and never have had, an intelligence testing program. Many of the firms were included in the original list of users because the firm's name was mentioned in a report of research with intelligence tests, or

research was known to have been performed in these firms. How much of this experimental work has been done by members of business firms and how much by outside research workers in psychology is not known, but it might be interpreted that a large share of it was done by research students in the universities. It seems that few firms have ever been regular users of intelligence tests or have had a testing program as a part of their personnel activities.

The twenty-two companies which now have an intelligence testing program may be divided thus: Manufacturing 5, Department Stores, 5, Distribution 12. This suggests that the larger number of users of intelligence tests are distribution firms and further implies that intelligence tests have a wider practical use in the investigation of adjustment problems among clerical-executive and sales workers than among mechanical workers.

WHAT THIS INVESTIGATION SUGGESTS

The investigation of the 22 firms, which are classified as having intelli-

gence testing programs, might be carried further to determine more exactly what prediction or diagnosis is made for purposes of vocational adjustment. This has not been done, but it is quite possible that the number of those using tests for any form of exact prediction would be quite limited.

CONCLUSION

Intelligence tests have never had wide usage in industry for purposes of exact prediction. Never have there been more than a very few firms testing large numbers of applicants or employees. But it is likely that the decreased use of intelligence tests in recent years is due to economic causes rather than to a 'disillusionment' of industrialists regarding their value.

It is impossible that the dream of the early industrial psychologist—to place in the hands of the personnel executive a psychological measuring rod for exact prediction—can even be realized. Intelligence tests are still regarded, today, as experimental materials, for the use of the expert in the study of vocational adjustment.

Incentives and Wage Plans

BY W. J. DICKSON, *Western Electric Company, Chicago*

The incentive plan did not work. Mr. Dickson tells why. Social considerations and desire to be a good fellow proved stronger than desire to earn more money, in the group of assemblers whose behavior is reported on here.

WHAT are the personal relations between employee and employee, employees and supervisors, and between supervisor and supervisor? To study this, a group of male operators and their regular supervisors were examined over a period of six months. During this time the operators worked as they were accustomed under standard shop conditions.

We shall not attempt to describe the situation as a whole but shall confine attention to two aspects of it, output and the supervisory hierarchy.

The operators were working under a system of group piece work in which the entire department was considered a unit for purposes of payment. The earnings of the department were prorated among the individuals in it on the basis of their hourly rates which were guaranteed by the firm in case piece rate earnings were insufficient to cover them. The more work the group turned out, the higher their wages would be. Inasmuch as the earnings of any one individual were affected by the output of every other person in the group, it was expected that the faster workers would bring pressure to bear upon the slower ones.

As a further means of stimulating output, a "bogey" was established for each job. The bogey was an output standard in terms of which an individual's efficiency could be measured. It was something "to shoot at" and was intended to serve much as a record does for an athlete. The closer the employees came to it, the higher their wages would be.

In actuality the situation was almost the opposite of these expectations. Among the operators there had been established the idea of a day's work. This concept of a day's work was of interest for two reasons. In the first place, it did not refer to the bogey or to any other standard of performance officially imposed. The bogey was fixed at 914 units per hour, or 7,312 for an eight-hour day. As compared with the day's work of which they spoke, the bogey was considerably higher. This, together with the fact that many of them did not even know what the bogey was or what it stood for, indicated that it was not functioning as a competitive standard for this group. Second, the idea of a day's work was contrary to one of the basic notions in their incentive plan. Theoretically, the amount of work done by

different individuals should have varied as individual capacities varied, and for any one individual variations from day to day might be expected. In such a system, the concept of a day's work, of a specified number of units to be completed each day by everyone, had no place. Here, then, was more evidence that the wage plan was not functioning as it was intended.

As the study progressed, it became more and more apparent that the operators' conception of their day's work had a much wider significance than has thus far been implied. They believed that if they exceeded that amount to any appreciable extent, "something would happen." The "rate" might be cut, the "rate" might be raised, someone might be laid off, or the supervisors might "bawl out" the slower men. Men who consistently exceeded this standard were looked upon with disfavor. Their co-workers felt they were disloyal, that they were "rate killers," and various tactics were used to keep them in line. Among these were sarcasm, ridicule, and a practice called "binging." If a person did something out of the way, one of his co-workers had the right to "bing" him. This consisted of hitting him a stiff blow on the upper arm. The person struck ordinarily took the blow without protest and did not strike back. The interesting thing about this ritual was that it was frequently used to dissuade the faster workers.

From such evidence the investigators concluded they had here come upon a set of basic attitudes. These beliefs regarding a day's work and the dangers involved in exceeding it

were not confined to a few individuals but were held quite generally both by the men in the observation room and those in the department. They suggested a group standard in terms of which the behavior of different individuals was being regulated.

The method of investigation of these situations utilized two types of study simultaneously. One consisted of an indirect, conversational interview; the other of direct observation. The interviewer remained as much as possible an outsider to the group and the interviews were held by appointment in a private office. The observer was stationed with the group in the rôle of a disinterested spectator. His function was to keep records of performance and of events and conversations.

The observer adhered to certain general rules. He gave no orders or answered any questions which necessitated the assumption of authority. He did not enter voluntarily into any argument. If forced to do so he was as noncommittal as possible. He did not force himself into conversation. He did not express approval or disapproval of the group's behavior. He did not violate confidences or give information to supervisors.

FEAR OF HIGHER STANDARD

An idea frequently expressed, directly or indirectly, by employees in their interviews was that their weekly average hourly outputs should show little change from week to week. Their reasons for this were similar to those advanced for not exceeding their day's work. An unusually high output might become the standard their

supervisors would attempt to force them to maintain. It would be a way of confessing that they were capable of doing better.

When the departmental efficiency records were obtained and plotted, it was found they were almost devoid of individuality. Some showed very little variation, continuing along at the same level over the entire six months' period for which their records were available. These perfect specimens were, however, in the minority. Most of the curves did show slight irregularities, but on the whole approximated a straight line. The ideas and beliefs the operators had with respect to their output, then, were in fact being reflected in their performance records.

In their attempts to maintain uniformity in output curves, the operators resorted, in varying degrees, to two practices. The first consisted of reporting sometimes more and sometimes less output than they actually accomplished. The group chief took individual output counts at the close of each day. In practice, however, instead of actually counting the work each wireman did, which would have been a laborious task and an almost impossible one considering his many duties, he had them report their outputs to him. The observer kept track both of the outputs reported by the men and of their actual outputs. The latter were derived by an actual count. Comparison of the two sets of figures thus obtained showed that at the end of the study two men in the group had actually completed more work than they ever reported. The other seven wiremen reported more work than they

had accomplished. With the exception of two cases, however, the differences were negligible. The chief value of these records was that they reflected the care and pains to which the operators went in order to even off their reported outputs.

DAY WORK CLAIMS

The second and most important device was that of manipulating the amount of net working time used by the department in computing their output rates. This was accomplished by day-work allowance claims. The department permitted employees to claim day-work for unusual stoppages beyond their control. It did not, however, define what an unusual stoppage was or attempt to state which were and which were not beyond their control. Such a definition would have been difficult to make because practically all delays were in some sense subject to employee control. Moreover, if the plan worked as it was supposed to, there was no need for such a definition. It was assumed that the employees would resent any stoppage which interfered with their work and, as long as the opportunity of doing piece work presented itself, they would never deliberately bring about a situation in which they could get only day-work. Yet this is exactly what happened. They frequently claimed more day-work than they were entitled to or conspired to bring about stoppages which would justify their claims. They saw, of course, that the more day-work they were allowed, the less output they would have to report in order to maintain a constant average hourly output rate.

One of the results of these practices was that the departmental efficiency records did not reflect the actual situation. Insofar as upgrading and other official decisions were based upon such records, the errors were of considerable importance.

A second result related to the awkward situation in which the group chief was placed. This will be discussed later. The evidence above cited is sufficient to show that the incentive plan was by no means functioning as intended. The group had aligned itself so that the plan's main objectives were defeated.

Inasmuch as the operators were agreed upon what constituted a day's work, one would expect their average hourly outputs to be about the same. The findings, however, showed that this was by no means the case. There were, in fact, marked differences in their levels of performance. In attempting to account for these differences, their relative rank in output was compared with their relative rank in ability as measured by tests of intelligence and dexterity. This comparison showed that there was no relation between their ability as measured by these tests and their actual performance. The lowest producer ranked first in intelligence and third in the dexterity tests. The man who scored highest in the dexterity test ranked seventh in intelligence and seventh in output. The man who scored lowest in the dexterity test shared first place in intelligence and ranked fifth in output.

This, then, was a situation in which the native capacities of the men were not finding expression in their work.

In order to see whether differences in earnings accounted for differences in their outputs, these two factors were also compared. Here again no relation was found. The man who ranked first in earnings ranked fourth in output and the man who ranked lowest in earnings ranked fifth in output. Two of the men received the same wages, yet one produced an average of 16 per cent more work.

To what, then, did these differences relate? Careful analysis of all the available data showed that these differences in output related, however roughly, to the individual's position in the group. Position in the group, in turn, depended largely upon the extent to which the individual's behavior was in accord with the sentiments of the group.

These sentiments may be stated as follows:

(1) You should not turn out too much work. If you do, you are a "rate buster."

(2) You should not turn out too little work. If you do, you are a "chisler."

(3) You should not "squeal."

(4) You should not be officious. By this was meant that if you were an inspector, for example, you should not act like one.

To be a bona fide member of the group, one not only had to conform to these standards but one also had to be willing to take part in their activities, such as games of chance and social conversation. Now the man who ranked highest in output was exceeding the group's standard of a desirable day's work. This person was a hard, enigmatic, self-reliant person, who

was not the type to conform to another's wishes. He seemed to get a certain pleasure from doing things the others disliked. The best liked person was one who kept his output exactly where the group agreed it should be. This man and one other man refrained from reporting all the work they did. By so doing, they avoided breaking the group's standard. The men who ranked lowest in output were looked down upon by the others. They were somewhat disloyal to management and to their associates as well. Other observations similar to these tended to confirm the conclusion that the relations between employee and employee exercised considerable influence upon performance.

GROUP CHIEF'S PROBLEMS

Let us revert now to some of the problems with which the group chief was confronted. The actual situation in which he found himself can be illustrated by the matter of day-work claims. Some of the employees, as was pointed out, were entering excessive claims in order to maintain steady output rates. The group chief was well aware of this, but there was little he could do about it. For example, the wiremen might claim they were being delayed by defective materials. As soon as the group chief had proved to his satisfaction that the materials were of standard quality, he might find they were no longer blaming materials but had shifted the cause of their complaints to slowness of the solderman or inspector. If he questioned the solderman, the latter could maintain that he was not too slow, or that the wiremen had so arranged

their work that no one could keep up with them. The wiremen, on the other hand, could claim that the solderman was just defending himself and that they were in the right. The group chief had too many other duties, to decide whether the claims were justified. To do so, he would have had to stand over them with a stop watch all day. He could not refuse their claims without inciting an argument and appearing arbitrary to his men. He well knew that some of their claims were justified, and that to suppress all of them would be unjust. On the other hand, if he attempted to honor some and refuse others, he would be open to charges of partiality. The difficulty here, as with many of the other problems he encountered, was that there were no objective criteria in terms of which the validity of their complaints could be tested.

CONFLICTING DEMANDS

The group chief, then, was in an embarrassing situation. As a representative of management, he was supposed to keep day-work claims at a minimum. As the man directly responsible for supervising the wiremen, he was under pressure from below to report the claims as they were given to him. Because of this and similar conflicting demands, he chose to report faithfully his subordinates' claims for day-work. Once having taken this position, he was able to protect himself in two ways. First, as was previously shown, the departmental efficiency records did not reflect the real state of affairs. What the foreman saw when he looked

at the efficiency charts was an average hourly output rate and not the actual output or hours of work upon which that efficiency was based. Second, should anyone investigate the day-work claims being made, the group chief could place the blame wherever he wished. The employees always had to give the group chief a reason for any claims they might make. The group chief entered these claims in a record book which he kept for that purpose, but no one except himself and the investigators ever referred to it. He regarded it as his private property. If, therefore, anyone should ever ask him why his men were claiming day-work, he could attribute the reason to defective materials or some other factor for which he was not responsible. He could not, of course, say that the solderman was too slow because he was responsible for seeing that such a thing did not occur. He might, however, place the blame on the inspector because the inspector was a representative of an outside organization and reported to a different set of supervisors.

The group chief, then, instead of insisting upon a rigid adherence to the "rules of the game" as conceived by management, had to all appearances become a member of the group he was supervising. They had their own rules, which were frequently contrary to those imposed upon them. By so doing, the group chief gained the friendship and sympathy of the men he was supervising, but at the same time increased the distance between himself and the foreman, and his own position became less secure. Had he insisted upon representing manage-

ment with a firm hand, he might have gained a larger measure of personal security, but he would have lost sympathetic control of his men and his duties as a supervisor would have been even more difficult. He would have become what the employees call a "driver" and the group chief well knew that such tactics would not greatly alter the real state of affairs. From this it is apparent that the group chief could not be held personally responsible for the situation which existed. He had been caught between conflicting demands, which were not amenable to his personal control.

CONCLUSIONS

Such, in brief, was the situation which this method of investigation disclosed. In conclusion, some of the significances of this study may be pointed out. These statements apply specifically to this one group and are not to be regarded as generalizations. It is possible, however, that they do apply wherever the condition called restriction of output exists and, as Mr. Mathewson's work shows, that condition seems to be quite widespread. The conclusions follow.

1. Output, for these operators, was one form of social behavior. This was attested to by the fact that their concept of a day's work was for them a norm of conduct. As such as it was the chief integrating factor in this group. Furthermore, individual differences in average hourly output related more to the position the individual held in the group than to his capacity to perform.

2. Given this type of situation, the supervisory hierarchy is not an ade-

quate method of control for all purposes. The foreman could not exercise intelligent control because the necessary facts were not communicated to him. The solution to this problem did not lie in improving supervision. Supervisory training is based upon the assumption that the supervisor is responsible for conditions which exist and that if he is sufficiently informed he can control them. This study suggests that there are, at least, limitations to what can be accomplished in this way. The group chief was well trained, yet that did not enable him to solve all of his problems. The chief difficulties he encountered were beyond his control and seemed to inhere in the situation itself.

3. It is clear that the problems encountered were not due to a logical insufficiency in the wage plan. Given the basic attitudes of this group, it is doubtful if any form of incentive could have succeeded. Wage plans assume that the worker is primarily motivated by economic interest and that he will act in a logical way. This study shows that social considerations outweighed economic ones and

that their actions were essentially non-logical.

4. This study has some bearing upon the problem of vocational selection, for it will be seen that insofar as the conditions herein described obtain, scientific selection and placement does not insure corresponding efficiency.

5. Finally, the bearing of this study on problems of employee contentment needs to be emphasized. One of the workmen in this group was exceedingly discontented, not because of the job, the pay, the supervision, or the working conditions, but because of the constraint placed upon him by his fellow workmen. On the one hand, he was capable of turning out more work and wanted to do so, but he was restrained by thoughts of how his associates would regard him. This conflict of loyalties was also evident in the group chief's situation. Whether to be loyal to his subordinates or to the management he represented was a question which must have cost him a good deal in terms of worry and strain.

See article elsewhere in this issue for further discussion of this study.

The Personnel Research Federation; What It Is; What It Does

BY CHARLES S. SLOCOMBE

The following article has been prepared in response to numerous requests that the Personnel Journal publish a comprehensive outline of the scope, past achievements, and future plans of the Personnel Research Federation. Readers are referred also to an editorial, elsewhere in this issue, for information about plans for an expansion of the Federation and of the Personnel Journal, to render more service in answering present-day perplexing questions about human relations.

THE Personnel Research Federation was created in 1921 on the initiative of the Engineering Foundation and the National Research Council. It is a co-operative federation of industrial and commercial companies, trade and technical associations, research institutions, governmental establishments, social agencies, and individuals. Its objects are to aid business organizations, technical societies, research and educational institutions, social agencies, and governmental establishments in the solution of problems of personnel; and to better the conditions and relations of men in their occupations.

Officers of the Federation are C. G. Stoll, president; Howard Coonley, Harvey N. Davis, and John H. Goss, vice presidents; W. A. Griffin, secretary; and Beardsley Ruml, treasurer. Mr. Stoll is vice president of the Western Electric Company; Mr. Coonley, president of the Walworth Manufacturing Company; Dr. Davis,

president of Stevens Institute of Technology; Mr. Goss, vice president of the Scoville Manufacturing Company; Mr. Griffin, assistant vice president of the American Telephone and Telegraph Company; and Mr. Ruml, treasurer of R. H. Macy & Co.

The head office of the Personnel Research Federation is in the Engineering Societies' Building at 29 West 39th St., New York City.

WHAT THE FEDERATION HAS DONE: SOME STUDIES

The Federation has long experience in advising companies on policies and practices. It has wide contacts with investigations conducted in industrial and commercial companies, governmental departments and in the universities. It can enlist the services of research workers in personnel subjects and in their industrial applications.

Studies in different fields include the following.

Employer-employee relations

1. *The effect of company policies on employees.* A paper mill wished to enter into individual contracts with employees guaranteeing full-time employment to those of more than five years service, and requiring compliance with rules of the company. A Strike followed introduction of the plan but was settled. After the plan had been operating some years, the Personnel Research Federation made a complete study of what the employees thought of the plan, the number who objected to it, and how it had affected the loyalty of employees.

2. *Why strikers strike.* During the New Bedford textile strike a study was made to see how much the strikers understood of the reasons for striking, what they thought of the Union and how well they understood the policy of mill management.

3. *Employee relations and efficiency.* The Federation investigated in manufacturing plants the personal relations of worker to worker, and worker to supervisor, that interfere with efficient production and developed ways of clearing up situations in which there is restriction of output.

4. *Supervisory training for improved employee relations.* A program of supervisory training by both direct methods and conferences was planned and conducted for improving public relations and employee relations.

Technical personnel methods

5. *Promotion and transfer of supervisors.* In connection with a company reorganization of operating departments the Federation made job analyses of each supervisor's job, rated

each man for his abilities, and put over smoothly the transfer and promotion of 100 supervisors.

6. *Subjects on which members have been advised:* (a) Standards of output on factory jobs. (b) Variations in output as affected by length of rest-period, method of wage payment, etc. (c) Management partnership plan. (d) Study of the progress of 4,000 graduates of engineering schools and colleges in a company. (e) Methods of selection of tool-makers. (f) Selection and training of technical apprentices. (g) Selection and training of sales managers. (h) Improvement of employment office methods. (i) Use of medical data in safety work.

7. *Organization of a federal department.* The policy, methods of collection, reliability and usefulness of information of a Federal Bureau was surveyed; its relation to other Federal Departments, State bureaus and private industry studied and recommendations made for reorganization of functions and personnel.

Safety

8. *Accident prevention.* An accident prevention program based on employee selection and training was developed and directed for a company operating buses, street cars, and subways in a metropolitan area. Extensive adjustments were made without discharges and hundreds of thousands of dollars saved.

9. A similar program was organized for a company with small groups of employees scattered over a wide area, where employer-employee relations were different and there was no organized training or supervision.

10. *Merit rating on accident experience record.* The Federation made statistical study of the accident experience and claim records of automobile drivers for a group of casualty insurance companies, and developed a plan for merit rating.

11. *Automobile safety.* Safety in relation to automobile body construction, the incidence and frequency of skidding, and the effect of driver seating position on reaction time for brake application have been the subject matter of these studies.

Security

12. *Job opportunities in New York City.* A survey was made of the present and future opportunities for employment in 50 industries; also of the related industries to which workers might transfer if their own industries were declining.

13. *Occupational distribution in the United States.* A study was made of the changes in occupational distribution of the 50 million workers of the United States, and of beginning ages, length of service and retiring ages to determine labor supply required by major industries.

14. *Knowledge of occupations in United States.* For President's Committee on Social Security the Federation surveyed all studies of occupations to aid the Committee's attempt to find the ratio of employment to industrial activity, and the changes in this ratio that technological changes cause.

15. *Morale of the unemployed.* The Federation studied the breakdown of independence of attitude and the growth of radicalism among the unemployed and showed that even in a con-

servative profession such as engineering, long unemployment has a serious effect.

HOW THE FEDERATION HELPS ITS MEMBERS

Business executives are being faced with constantly arising problems in employer-employee relations and in working conditions vitally affecting all business. Upon stable relations depend production schedules, fulfillment of contracts, profits and peaceful public relations.

Through the Personnel Research Federation they develop greater community of their common interests and profitably impart their knowledge to one another and learn of new ideas in personnel methods and employee relations. The Federation is prepared to assist members in the following ways.

1. Plan and conduct open or closed conferences of executives within companies or of industries.
2. Appraise and report the experience of other companies or industries on any subject.
3. Collect and summarize experiences as recorded in magazines, books and reports.
4. Conduct such further investigations, inquiries or studies as may be necessary for the solution of a problem.
5. Publish a magazine.
6. Publish special reports.
7. Maintain a staff for consultation, advice and reference.

Financial support

Support for the Federation comes from four major sources:

1. Company members who pay dues of \$100 a year.

2. Sustaining members contributing \$100 or more a year.
3. Special appropriations from foundations and institutions for the promotion and conduct of special studies.
4. Fees from company members for special services.

Inquiries are welcomed

The Federation welcomes inquiries, and will gladly answer questions and send such information as:

- (a) Subjects on which the Federation can help a company.
- (b) Fuller descriptions of the results of past studies mentioned above.
- (c) Plans for industrial relations conferences.
- (d) List of books and magazines articles on personnel subjects prepared by the Federation.
- (e) Report of proceedings of Federation Conference on Employee relations held in January 1935.
- (f) Further details of the services the Federation renders its members.

Companies that have used the federation's services include Western Electric Company, American Telephone and Telegraph Company, Boston Elevated Railway, Eastern Massachusetts Railway Company,

Walworth Company, Scovill Manufacturing Company, Eastman Kodak Company, Dennison Company, Colgate Company, White Motor Company, Cudahy Brothers, National Bureau of Casualty and Surety Underwriters, Erwin Wasey and Company, National Restaurant Association.

Institutions that have sponsored special studies include The Engineering Foundation, Rubel Foundation, Carnegie Corporation, Social Science Research Council, National Advisory Council on Radio in Education.

Colleges and universities that have been affiliated with the federation are Brown University, Carnegie Institute of Technology, Chicago University, Columbia University, Dartmouth College, Harvard University: Graduate School of Business, Massachusetts Institute of Technology, New York University, Northwestern University, Pennsylvania University, Princeton University, Purdue University, Stanford University, Stevens Institute of Technology, University of Michigan, University of Pittsburgh: Research Bureau for Retail Training, Yale University.

Overcoming Time-Study Fear

By CHARLES E. BEDAUX, *President International Bedaux Company*

Drawing on his experience in many lands, Mr. Bedaux, efficiency engineer, tells how to convince workers a study of their motions is to their own best interest.

THE factor most susceptible to disturb Employer-Employee relations is the one of pay. To labor the most important considerations in the relationship are: First, the purchasing value of its work; second, the degree of permanency of this purchasing value; and third, the effect the quantities produced under this value may have on the number employed.

Anything that is thought likely to endanger the favorable position of these three points is naturally looked upon with suspicion and quickly opposed by labor.

To the operator time and motion study, standard setting, rate setting are management activities that are susceptible to affect the three points of individual and group security and ample proof must be given that the safety of those three points will be carefully safeguarded before an adequate labor cooperation can be expected.

Too often the proportions of an increase in production due to technological improvement is estimated by management in a haphazard superficial way. The unfortunate result is that with exceptions that are only too

few labor believes that a demand for a production increase whether caused by technological improvement or not means another demand later on if the first one is not resisted.

To correct this impression management must agree to make a request for a production increase only after the justice of the change is proven by actual measurement and with the guarantee that no other request for an increase on that operation will ever be made unless justified by a further technological improvement.

What I am going to say must not be taken as an indication that I am blind to or unappreciative of the remarkable cooperation consulting engineers have enjoyed at the hands of labor all over the world. I am aware of this cooperation and for it we are grateful, but we do know that we have had to work and work hard for it. In every place we have had to prove our case and whenever, for whatever cause, we have tried to push forward faster than we could prove, we have failed.

This being understood, what I want to say is that when it is not properly informed and its cooperation not secured labor considers time study men and rate setters as agents of manage-

ment who are likely to endanger the three main points of security, that the less these agents are told or shown the higher the pay is likely to be, and if the pay is to remain constant the lesser will be the task for the pay received.

LEADS TO DISTRUST

To the average operator the making of a time study on the factory floor means the beginning of a somewhat mysterious process out of which will come an additional demand on his God given natural income, his daily renewed physical strength. Not without exception but too often his instinctive reaction is one of strain, distrust and occasionally distress.

We need not consider the professional opposition to time study practiced by those who thrive on the act of opposition rather than on its results, but let us consider the sincere and justified objections, they deserve serious attention.

As it is generally done, a time and motion study on the factory floor requires the recording of ten or more cycles of the operation to ascertain the relative value of each element of motion. This requires a time during which the operator, if uninformed, feels himself under an observation, the result of which may work to his detriment. The realization of being watched and the thought of the possible adverse consequences of a mysterious process in which he has no part causes him to object and labor under strain.

This, however, does not happen when labor has been convinced of the advantage of a study made to allow

the setting of effort values that will give him greater security. In that case the operator invariably co-operates.

When labor remains unconvinced I have noticed that girls are more likely to object than men. It is probably because being more nervous the reaction is more marked with them. Whatever the cause, I do believe that being watched and analyzed at work, whether man or woman, does exercise in varying degrees a nervous strain.

Employer-Employee relations will be improved by reducing very materially the time of the study on the factory floor through the taking down of only one cycle of the operation and giving the operator the opportunity to convince himself afterwards of the fairness of the analysis and of the work value resulting from it. This reduces the strain and removes the mystery. To proceed in this manner is now possible with the Motion Picture Measurement System. In this system a special motion picture camera with an automatic timing device is set up on the factory floor. Pictures are then taken of an employee at work.

The time element being contained in the film itself, each frame or picture being exactly one thousandth of a minute, the breaking down into motion elements is done from the film by the simple reading of the frame count for each motion.

In usual studies the factory operator may think that some motions have been overlooked or deliberately omitted or that an error has been made in reading the time. This source of objection is removed as the camera eye and the electrical timing cannot make

a mistake. All motion elements and their time value are recorded on the film and must therefore be considered.

The operator in the usual method of rate setting from time study may argue that the speed asked of him is unreasonably greater than the one he put forth while studied. This possible source of disagreement is here disposed of as the exact speed of the operator is reproduced at will through the projector.

The operator may feel abused because a standard, the fairness of which he challenges, bears on an operation that is no longer in manufacture and cannot be checked. Under our new system the operation can be reenacted at any time even though no longer in manufacture.

TRUE FACTS SHOWN

In the case of technological improvement, the increased production asked may be considered by labor as unfair. Many serious labor troubles have started over this sort of argument, but with the Loop System, the difference in the number of frames in the loop taken before the process betterment and in the one taken after shows the true time value of the improvement made and sets automatically the increased production expected.

The operator may question the capability of the rate setter to rate properly, yet it would be difficult and unwise to have a cumbersome group

of men study the same operation on the factory floor, but if a number of qualified men acting as a group study the operation through the loop running at varying but always known speeds over and over again until every motion is analyzed and properly valued, then the operator is more likely to consider himself fairly treated and satisfied.

If in addition to the above safeguards the standard or "B" Value once set is guaranteed against any change not supported by technological improvement and the hourly rate of pay is guaranteed against any decrease that is not applied to the entire plant and justified by trade or economic conditions, than labor may feel reasonably secure in the preservation of Point One and Point Two. The individual operator may then produce all he can. There is one more point and it is Point Three. The operator may feel that in producing all he can he deprives his fellow worker of a job. If he does, on the main he is wrong. In doing his utmost, in the long run he helps his fellow man by reducing for him the burden of purchase, though it is true that during the period of transition he may cause his neighbor to lose his position. To take care of the unemployed during the transition period is clearly the duty of the true beneficiary, the community as a whole. The nation is aware of this responsibility. Labor will soon be given protection on Point Three.

Twisting Relief Rules

BY HAROLD D. LASSWELL AND GABRIEL ALMOND, *University of Chicago*

Deviations from rules by different relief aides assigned to interview complaining clients are described, and causes of the deviations analyzed. Lasswell and Almond report here on a research of interest to all who must promulgate regulations for subordinates to follow.

SOME officials apply rules with scrupulous rigidity, and not plasticity. Some are stimulated by bold and demanding behavior to misapply rules and discriminate against, or in favor of, the other person. Others are susceptible to flattery, or over-react against efforts to curry favor with them. Some override the submissive; others go out of their way to indulge the meek.

Rules are one of the principal devices of control in business, government, and general administration. It is common experience that the relationship between the phraseology of a rule and its application is subject to many influences. If the wording is ambiguous, differences in application will arise from varying constructions put upon the words. If bribery or intimidation occurs, an administrative staff may bend the rules to personal profit. If certain philosophies of administration prevail, rules may be twisted for the benefit of or against the "under dog." It is universally conceded that many discrepancies between rule and act originate in the unconscious interplay of personalities.

Is it possible to discover the relative importance of "unconscious" or

"broader personality factors" in the relation of salesman and customer, foreman and worker, official and client, and in some degree to remove them from the realm of hunch to the realm of fact? Then there would be an adequate basis for practical psychotherapy in the daily practice of administration.

This paper reports a study of the relationship between rules and rule application in an administrative situation which was sufficiently simple to expose the unconscious personality factors.

Clients on public relief in many districts in the city of Chicago in 1932-33 were expected to make complaints in person at the complaint desk which was maintained at district headquarters. Complaint aides decided whether the request entitled the client to wait to see his case-worker personally. The judgment of the complaint aides at the Halsted office where this investigation was conducted was supposed to be guided by a very explicit code of rules which defined the nature of requests which would entitle the client to see his case-worker. A certain number of days of delay in food or coal orders merited waiting, as did

health emergencies and final eviction notices. Many clients came to the office on appointment, or for routine "waiting," such as for street car tokens, tickets for the purchase of ice, or for correction in orders. With these exceptions, all requests were to be delivered to the case-worker in the form of a written message and the client sent home.

It will be seen that the definiteness of these rules practically eliminated the possibility of deviations arising from uncertainties about the meaning of words.

Certain possible sources of deviation between official act and rule can be dismissed as of small importance in this relief client—complaint aide relationship. Intimidation, bribery or philosophy of administration were not significantly operative. This statement rests upon the testimony of those who were in constant and intimate contact with the particular aides during the observational period.

With these possible sources of deviation minimized, resulting discrepancies between rule and act can be mainly attributed to that broad category of influences called unconscious personality factors. It was decided to note the ways in which clients approached the complaint aides in making their requests, and by connecting this with departures from rules to detect the magnitude of the effect of different approaches upon various administrators.

CLASSIFYING BEHAVIOR

The complaint aides agreed upon a list of adjectives to characterize the various degrees of behavior exhibited

by the clients in making their requests. "Non-aggressive" behavior was "requesting," "pleading and complaining," "formal and reserved," "submissive," "confused," "compulsive," or "insistent." Aggressive behavior was described as active "demanding," "threatening," "arrogant," and "clear cut and concise;" or as passive, "wise cracking," or "curries favor." It was considered to act as a strong stimulus upon the personality of the other to comply with or to reject a request. Non-aggressive approaches lack intense impact upon the personality of the other; they arouse indifference. The aggressives impinge decisively upon personalities they touch, impelling them to do something—favorable or unfavorable—for the persons concerned. The distinction between aggressive and non-aggressive approaches is made in terms of the conscious appraisal of the administrators affected. This act of appraising the impact of the personality of the other is not to be confused with the act of indulging or denying the request. It is precisely the spread between this initial estimate and the final official act which constitutes a significant difference.

The complaint aide noted the behavior of the client on the slip which was used to record the request and its disposition. The aides who kept these records over a six months' period were experienced workers. Reliability was checked by having one of the aides observe the behavior of the clients toward the other aides, and by comparing his notations with those of the aides in question. The results showed practical agreement on the broad

categories of "aggressive" or "non-aggressive."

It was not certain at the beginning that the method used would be sufficiently refined to disclose significant differences in the behavior of the complaint aides. But striking divergences did in fact emerge. These will be discussed in three cases on which data are unusually complete. Aide 1 departed from the rules to favor those who made non-aggressive approaches, but aides 2 and 3 gave less than the rules called for, to those who made such approaches.

This comes out very clearly in the analysis of the contacts between 200 relief clients and these complaint aides. These 200 clients made requests of the three complaint aides 1, 2 and 3 exactly 1,012 times. 432 of these contacts were with Aide 1, 273 with Aide 2, 307 with Aide 3.

Aide 1 was approached submissively 86 per cent of the time. On 21 per cent of these occasions, he departed from the rules. Detailed analysis of the total number of instances in which he deviated from the rules when non-aggressively approached shows that in the overwhelming number of cases, the clients got the benefit of the deviation. Thus in 87 per cent of the instances of departure from rules, Aide 1 permitted individuals to wait to see the case worker in contravention of the regulations.

On the other hand, when confronted by aggressive behavior by clients, Aide 1 showed a pronounced inclination to discriminate against them. The result was unfavorable to the client 78 per cent of the time.

A tendency of almost equal strength

in the opposite direction appears when the records of Aides 2 and 3 are closely examined. If they deviated from the letter of the rule when non-aggressively approached, the applicant lost rather than gained. Aide 2 discriminated against them 80 per cent of these occasions, and Aide 3 discriminated against them 72 per cent.

RESPONSE TO AGGRESSIVENESS

Their responses to active aggressive behavior is a little different. With Aide 3, 62 per cent of deviations worked to the disadvantage of the client. Aide 2, on the other hand, was evidently somewhat submissive, since 67 per cent of her deviations from rules were favorable to the aggressive client. This, it will be recalled, is the reverse of her reaction to submissiveness.

When confronted by passively aggressive behavior Aide 1 is paired with Aide 2 and both contrast with Aide 3. In 75 per cent of the instances in which Aide 1 deviated from rule, the passively aggressive client benefitted. This holds in 60 per cent of similar instances for Aide 2. Aide 3 shows no significant tendency to favor the one or the other, the percentages being 48 favorable, 52 unfavorable.

The foregoing results distinguish rather clearly between forms of behavior in administrative situations. Aide 1 discriminated in favor of those who approached him submissively and discriminated against those who were actively aggressive. Aide 2 favored those who were aggressive, and deprived those who were non-aggressive.

Aide 3 discriminated against submissive approaches, and showed no particular sensitiveness to passive aggression.

II

Such variations in rule application are no doubt typical of many administrative situations, and it seems probable that self-awareness among administrators can be fostered by records of this type.

Yet another aspect of the matter is of general interest. Who are these administrators who behave like Aides 1, 2 and 3? Can we specify some of the antecedent characteristics which predispose to behavior of each kind?

Behavior in any setting is partly predictable if the past experience of the participants with prominent features of the present situation are known. In the administrative situation just described, the rules stand for constituted authority, and the official is expected to identify himself with this authority, and to conform to its prescriptions. The administrator who departs from the rules for the benefit of the client is himself assertive against authority. If he departs from the rules to discriminate against the client, he aggrandizes authority.

The clearest case of anti-authoritarian liberality in the application of rules is that of Aide 1, who indulged those who displayed submissive approaches. The roots of his attitude were found to be deeply embedded in his relationship to authority in his family circle. He was a young man of 23. It was learned that his early family relationship was marred by frequent and violent quarrels between

his parents, who were otherwise congenial and indulgent. Under these circumstances, he was unable to rely upon the emotional stability and indulgence of the environment. Very much attached to his parents, he did not express his resentments directly, neither did he completely repress his hatred of authority. He became conciliatory and diplomatic, endured inner discomfort and suffering, and became notably gentle and kind in dealing with all whom he fancied to be in trouble. Here was the basis of the relatively extreme sensitiveness which was exhibited in ignoring the rules for the benefit of non-aggressive clients.

His masochistic tendency and craving for affectionate indulgence made him susceptible to good-humoured wheedling and to similar passive approaches.

His discrimination against those who approached him aggressively is not at first sight consistent with the conciliatory pattern which has been described as typical of his approach to people. In the home and in all professional and social connections he was genial and detached, and was often known to be imposed upon by more aggressive natures. However, this was not the whole story. It appears that the enduring of discomfort was but the initial phase, and that this was followed by over-reactive efforts to escape from disagreeable situations. During his early days in the service, he was no doubt intimidated by the bolder approaches. As he became aware of his own tendency to take passive rôles in dealing with assertive people, he sought to escape from this

passivity. His discrimination against aggressive clients is his second phase of adjustment to the situation confronting him.

OVERSHADOWED BY SISTER

Aide 2 had a stable and dependable relationship to her parents, but as a child she had been somewhat overshadowed by the physical attractiveness of a sister. The resulting resentment was not directly expressed, since she was attached to the sister and to the code of conduct sponsored by her parents. The evidence suggests that most of her hostility against the disappointing features of her family life was successfully repressed, although some mild difficulties of adjustment persisted. We noticed how she discriminated somewhat in favor of those who flattered or "kidded" her; this suggests a strong craving for the affectionate attention which was to some extent denied in her family, owing to the attractiveness of the sister. Intimate knowledge of her reactions showed that she had moods of depression attended by reveries of self-pity. This tendency to devalue the self led to some suspicion of those who made advances toward her; it was noticed that she frequently complained of those who tried to curry favor. Special tabulations of her administrative behavior showed, in contrast to Aides 1 and 3, that she was very unstable in dealing with passive approaches, often becoming suspicious and discriminating against those whom she at first indulged.

Perhaps the comparative ease with which Aide 2 accepted authority in

the home had something to do with her failure to project upon others such discomforts as she experienced. (We find no special indulgence of the non-aggressive, as with Aide 1, and no evidence of striking sensitiveness to the needs of others. Her connection with the relief service was considered by her to be temporary, and she looked forward to a business rather than a professional career.) There were, to be sure, slight traces of over-scrupulousness about what was expected of her. Thus in one administrative shake-up, another aide thought he had some authority over her. She resisted this firmly, but when it was clear that the new rules made this provision, she wholeheartedly accepted the situation. But when the demands of the regulations and the demands of the applicant were conflicting, she yielded to the more immediate and insistent; hence her deviations in favor of active aggressive conduct.

Aide 3 was a young woman of 24, brought up in a stable emotional environment and was a general favorite because of her physical beauty. Since her emotional development was unwarped, she took for granted the flattery and appreciation which was given to her by the environment, treated it casually, and was not much influenced by it, as confirmed by her reactions in the administrative situation.

Her counter-assertiveness in dealing with aggression had a very different basis from that of Aide 1. She was directly expressing her annoyance at being deprived of her customary indulgence.

III

This study of rules and their application corroborates the impressions of common sense, that personalities differ widely in their response to the same manner of approach. The data bring out quite vividly what is meant by the play of unconscious motives and past experiences in determining conduct. Observational methods of the type used here can be employed to

promote self-knowledge among administrators of all kinds disclosing the effect of hitherto unnoted biases upon action. The source of these components of behavior can be sought in the earlier history of the person.

Hence it is possible to lay the foundation for more impartial administration of rules, or at least for administration which, if not impartial, has frankly and not inadvertently rejected the ideal of impartiality.

Matching Abilities to Jobs

BY E. G. WILLIAMSON AND J. G. DARLEY, *University of Minnesota*

Even in the face of depression conditions, the authors conclude, high school students continue to choose vocations of their dreams, rather than those in which they can succeed.

ONE of the basic objectives in vocational guidance is the alignment of occupational choices in terms of aptitudes, abilities, and interests. Guidance workers claim to assist students in choosing that vocation or occupational field wherein the student's level of ability will make for success. This methodology is characterized as the matching of abilities possessed by a student with those required in the particular occupation holding interest for that student.¹

Certain economic and industrial conditions, however, may complicate, impede, and sometimes even block this matching procedure as an effective technique in guidance. Koepke² has shown that certain industries are not organized at present to utilize or need a high level of mechanical ability. Bingham³ has shown the same fact by

superimposing the curve for the distribution of mechanical ability upon the curve of that ability as needed in present-day industry. There are more jobs utilizing average or low ability than there are people with corresponding levels of mechanical ability. Conversely there are more people with a superior level of this ability than there are jobs requiring such a level. On the basis of this present organization of industry, there is a serious discrepancy between the level of abilities available and those actually needed.

The process of matching the abilities of the student with the requirements of the job is further complicated by the capacity of the public to pay for professional services it needs. This aspect of the problem has been expounded with reference to medical occupations by the recent Committee on Cost of Medical Care.⁴

If one considers, for example, the

¹ Earle, F. M., *Psychology and the Choice of a Career*, London, Methuen and Co., 1933. Alexander, William P., *Research in Guidance. A Theoretical Basis*. *Occupations, The Vocational Guidance Magazine*, 1934, Vol. 12, No. 8, Apr. pp. 75-91.

² Koepke, C. A., *A Job Analysis of Plants in Minnesota*, Publications of the Employment Stabilization Research Institute, Vol. II, No. 8, University of Minnesota Press. June, 1934.

³ Bingham, W. V., *Abilities and Occupa-*

tional Opportunities, Abstract in *Proceedings of the Forty-first Annual Meeting of the American Psychological Association*, *Psychological Bulletin*, Vol. 30, No. 9, Nov. 1933, p. 732.

⁴ *Publications of the Committee on Cost of Medical Care*, No. 22, University of Chicago Press, 1933. *Fundamentals of Good Medical Care*, by Lee, R. I. and Jones, L. W., pp. 125-127.

need of the public for dental services, there are indications that the present 56 dentists per 100,000 population cannot provide adequate care; between 99 and 179 are needed. But, in terms of capacity to pay, these 56 per 100,000 may represent overcrowding. It is suggested that this discrepancy between the present supply and the estimated number required cannot be adjusted until dental costs are reduced. Obviously, vocational counselors, having no control over these basic economic conditions, are impeded in their attempts to help students plan occupational careers which will utilize their abilities in return for a fair remuneration. To what extent can counselors encourage students to prepare for dentistry in view of this disparity between capacity to pay, and dental needs? Should one say that "there is always room for a good man"?

For very few occupations and professions are there reliable data regarding the number of needed workers to replace those superannuated, permanently disabled, or retired for other reasons. Many guidance workers oversimplify this problem by taking U. S. census data as indicating the number of available jobs and needed replacements. These census data are indispensable for interpreting trends in occupational distribution and for indications of the extent and types of employed workers, but they yield no indices of the number and kind of workers needed by industry, business and the professions.

The fourth problem confronting the college guidance worker is the fact that the students counseled are, for the

most part, at the beginning of a training period to last from two to eight years. Suppose the counselor diagnoses the student's ability adequately and gives advice on the basis of such data, what assurance can he give that society will either demand or reward the student's services after the long training period has been completed? This is one of the questions which students and parents ask most persistently today. Can society organize or plan industry, business, and the professions so as to absorb students who possess abilities needed for socially beneficial work in these occupations?

Some counselors do attempt a solution of the problem of these economic restrictions by enlightening students, stimulating basic research and educating the public to an understanding. The purpose of these workers is to bring about a solution through agitating for a public demand for planning in employment needs, financial incomes, and occupational trends. Still other counselors agitate for a frank realization of the probability of continued oversupply of labor in all occupations and the consequent postponement of the age at which youth enters upon its vocational career. Some advocates of this solution propose that students be kept in school longer and that this additional period be given over to training in citizenship and intelligent understanding of present-day technology, problems of government, and appreciation of cultural values. There is, of course, some danger of resignation when youth is told that the days of overnight success are gone, never to return, and that subsequent generations must adjust to the expectation

of permanently curtailed financial incomes. If this condition does obtain, then vigorous attempts must be made to cultivate new values to replace the old ones of Croesus. Such an ambitious undertaking is tremendously intriguing and indeed may cut the Gordian knot. Certainly this attempted solution, issuing in the new general college movement in higher education, has been received enthusiastically.

VERSATILITY A SOLUTION?

One other solution has been proposed. It is epitomized in the familiar word, "versatility." The pliability of the human nervous system must be re-emphasized and students taught to make at least two strings for their bow. Koepke proposes this as one solution of the problems growing out of technological improvements in industry. Those who counsel students would agree that vocational choices today are too rigid and too specialized in view of the facts of technological changes and the distribution of abilities and interests. Many students and many counselors seem to think that each human being inherits the ability to do only one type of activity. Too little significance has been attached to the facts of occupational shifting of college graduates. Johnson⁵ has shown that graduates of one type of professional training actually do shift to another field of work with subsequent success. This fact would argue for commonality of training values in different curricula, for poten-

tial versatility among students, and, therefore, for less rigid occupational choices. But, of course, versatility has its own limitations in the form of distribution of abilities and in the amount of time available for training. Not everyone can or should train in medicine for the contingency of unemployment in engineering, assuming the latter to be a student's first choice. Of course, this *reductio ad absurdum* is not the basic idea of the principle of versatility, although many of its advocates fail to delimit the applicability of the general principle.

Since vocational counselors have little or no direct control over basic economic problems limiting placement possibilities, it would seem advisable for them to direct their efforts to the more immediate problem facing students, namely guidance in the selection of vocational training consonant with diagnosed aptitudes and interests.

Counselors are handicapped in their attempts to base their advice upon meaningful scores because most aptitudes have not yet been calibrated for occupations, but there is one ability for which averages have been established, namely, occupational intelligence.

Classification of workers in various occupations according to the level of intelligence they possess, reveals a fairly definite occupational hierarchy with considerable overlapping among groups. The fact that men in the professions have, as a group, a high level of intelligence, indicates that students who choose a profession for a life work should possess a correspondingly high amount; this would seem to be the minimal qualification for

⁵ Johnson, Palmer, *Aspects of Land Grant College Education*, University of Minnesota Press, 1934, June.

such a choice and the basis for a counselor's approval of training for such a choice.

This hierarchy of occupational intelligence was first demonstrated by Paterson⁶ in his analysis of Army Alpha data for white draft men in the World War. Barr⁷ later developed a refined scale for classification of occupations; Brussell⁸ has recently revised the Barr scale. Brussell's scale provides a classification of occupations in the following categories according to level of occupational intelligence:

<i>Classification</i>	<i>Illustrative occupations</i>
I. High professional and executive	Engineer, editor, inventive genius, lawyer
II. Lower professional and large business	Accountant, bank official, dentist
III. Technical, clerical, and supervisory	Building contractor, railroad clerk, master mechanic
IV. Skilled tradesmen and low clerical	Lithographer, mechanic, painter, paperhanger
V. Semi-skilled	Railroad fireman, hospital attendant
VI. Unskilled	Hostler, garbage collector, day laborer

While recognizing the complexity of the work, one may yet expect effective guidance to result in a reasonably high correspondence between level of academic intelligence and the occupational level of vocational choices. Such an expectation is in line with the

⁶ Psychological Examining in the U. S. Army, Memoirs of the National Academy of Science, 1921, XV, Part III, Chap. 15, Intelligence Ratings of Occupational Groups, pp. 819-837.

⁷ Terman, L. M., Genetic Studies of Genius, I, Stanford University Press, 1925, pp. 66-72.

⁸ Brussell, E. S., A Revision of the Barr-Taussig Scale of Occupational Intelligence, M. A. Thesis, University of Minnesota Library, 1930.

report of Henmon and Holt⁹ who found a fairly definite "hierarchical arrangement of occupations in relation to scholastic aptitude" for 16,350 Wisconsin high school seniors graduating in 1929.

The present study is an attempt to discover the amount of this correspondence obtaining for the choices of high school seniors in Minnesota. Such an analysis should provide data for determination of the effectiveness of guidance in getting students to choose occupations requiring a level of intelligence comparable to that which they possess. After making allowance for the elimination from school of many students who are qualified for or desire to enter occupations in classes V and VI, one may reasonably expect an effective guidance program to result in a distribution of choices among the other classes in the scale. Conversely, an ineffective program might result in a preponderance of choices classified in the upper brackets, because of the tendency of youth to aspire for professional success at the highest possible level.

The data for this study of occupational choices were collected as part of the annual testing program of the Association of Minnesota Colleges conducted for high school seniors. Each senior was asked to state in his own words his choice of life work or type of occupation. The number of

⁹ Henmon, V. A. C. and Holt, F. O., A Report on the Administration of Scholastic Aptitude Tests to 34,000 High School Seniors in Wisconsin in 1929 and 1930, Bulletin of the University of Wisconsin, Serial No. 1786, General Series, No. 1570, 1931, June, pp. 36-39.

seniors involved in this program in 1929 was 9,249, less than half the number in 1933.

In Tables I and II the number and per cent of vocational choices classified by the Brussell Scale are presented separately for men and women seniors

to 17.1 in 1933. Groups I and II account for 48 per cent in 1929 and 38 per cent in 1933 of all men. Perhaps this decrease indicates the beginning of a better distribution of vocational choices. Yet even by 1933, the percentage for group III, which includes

TABLE I

Summary of the number and per cent of high school senior men in each year for each occupational class for 1929 to 1933 inclusive

BRUSSELL OCCUPATIONAL CLASS	1929		1930		1931		1932		1933	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
I.....	1093	27.1	1340	23.4	1710	24.3	1826	22.9	1799	21.0
II.....	866	21.4	1552	27.0	1341	19.1	1563	19.6	1465	17.1
III.....	373	9.2	1009	17.6	889	12.7	925	11.6	1005	11.7
IV.....	169	4.2	461	8.0	766	10.9	779	9.8	856	10.0
V.....	17	0.4	33	0.6	52	0.7	60	0.8	77	0.9
VI.....	3	0.1	12	0.2	12	0.2	8	0.1	7	0.1
No choice given.....	1517	37.6	1329	23.2	2257	32.1	2798	35.2	3369	39.2
Total.....	4038	100.0	5736	100.0	7027	100.0	7959	100.0	8578	100.0

TABLE II

Summary of the number and per cent of high school senior women in each year for each occupational class for 1929 to 1933 inclusive

BRUSSELL OCCUPATIONAL CLASS	1929		1930		1931		1932		1933	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
I.....	62	1.2	168	2.6	212	2.2	222	2.1	176	1.6
II.....	2283	43.8	2540	39.9	3569	37.5	3937	37.5	3888	35.5
III.....	1141	21.9	2255	35.5	3359	35.2	3252	30.9	3243	29.7
IV.....	19	0.4	243	3.8	179	1.9	231	2.2	321	2.9
V.....	2	0.0	7	0.1	11	0.1	11	0.1	16	0.2
VI.....	0	0.0	0	0.0	2	0.0	0	0.0	0	0.0
No choice given.....	1704	32.7	1148	18.1	2203	23.1	2854	27.2	3291	30.1
Total.....	5211	100.0	6361	100.0	9535	100.0	10507	100.0	10935	100.0

of 1929, 1930, 1931, 1932, and 1933. The percentage of choices for men classified under group I remains relatively constant throughout the five-year period, being 27 per cent in 1929 and 21 per cent in 1933. The percentages for group II show a marked increase in 1930 followed by a decrease

clerical, sales and managers of small retail stores—the average types of work to which many of these students will probably be forced to adjust—is only 11.7. The data for group III fluctuate from year to year, but the other groups show stability. The small number of cases in the lower

categories may be due in part to the fact that high school students with the levels of abilities required for these groups were eliminated from academic competition before the senior year. But the explanation most likely is found in the failure on the part of the student to consider differences in levels of aptitude required for occupational success, and to the desire of most students to achieve success in white collar or professional jobs. The percentage of "no choice given" remains about the same, being about one-third of the entire group, for three of the five years.

The classification of women's choices in group I shows stability and, what is more interesting, a significantly lower percentage than was found for men. In 1929, 27 per cent of men and only 1 per cent of women chose occupations classified in group I. The other groups show stability in the percentage trends with the exception of an increase after 1929 for group II. With regard to the "no choice given" group, the percentage is smaller than for men for all years and drops significantly in 1930, followed by a gradual increase up to 1933. For some unknown reason the choices of 1930 seniors do not follow the trends of the other years; possibly this represents the first recorded impact of unemployment upon the decisions of seniors in this state. It is probable that prior to 1930 very few reliable employment figures were available for these seniors.

TENDENCY TO HIGH LEVEL

Now that we know the tendency for seniors, especially men, to choose occupations calling for a very high level of occupational intelligence, we

may turn to a comparison of these classified choices and the corresponding intellectual (or academic) level as measured by the College Aptitude Rating.¹⁰

Since this College Aptitude Rating strictly speaking, is not a measure of academic intelligence alone, being a combination of that aptitude and other factors which enter into high school grades, we cannot expect these vocational choices to conform rigidly to the occupational hierarchy. There is justification, however, in using C. A. R. rather than the test alone, since the former yields higher correlations with grades and is, therefore, a better index of aptitude for success in training courses.

Counselors, therefore, may use such an index of training possibilities as one means of locating the level of occupations for which a student gives some promise of success. For example, students with high academic intelligence possess one of the important qualifications required in college courses leading to the professions classified in group I. Conversely, students low in C. A. R. lack this qualification for the professions. The counselor, of course, should consider other qualifications before encouraging or discouraging students in their occupational choices. But this one factor of occupational intelligence is a *sine qua non* for effective guidance. The problem then becomes one of

¹⁰ This rating is the average of two percentile ranks, The Minnesota College Aptitude Test and high school scholarship for three and one-half years. For further description see, Johnston, J. B., *The Liberal College in a Changing Society*, Century Company, 1930.

comparing vocational choices, classified by the occupational intelligence contingent upon a single aptitude, it is not to be expected that choices

TABLE III

Summary of the number, mean and standard deviation of the College Aptitude Rating of senior men for each occupational class for each year

OCCUPATIONAL CLASS	YEAR	NUMBER	MEAN C. A. R.	STANDARD DEVIATION
I.....	1929	1093	45.8	25.1
	1930	1340	45.6	24.9
	1931	1710	46.1	24.3
	1932	1826	45.1	24.2
	1933	1799	50.1	24.7
II.....	1929	866	37.1	22.7
	1930	552	39.2	24.6
	1931	1341	38.1	23.6
	1932	1563	36.0	22.9
	1933	1465	41.8	23.9
III.....	1929	373	33.9	22.2
	1930	1009	36.1	23.0
	1931	889	33.8	21.1
	1932	925	32.1	20.6
	1933	1005	37.1	22.6
IV.....	1929	169	28.7	20.0
	1930	461	31.4	20.7
	1931	766	28.5	19.9
	1932	779	26.4	19.3
	1933	856	32.4	20.9
V.....	1929	17	43.0	27.8
	1930	33	36.9	23.9
	1931	52	31.3	26.9
	1932	60	32.2	22.4
	1933	77	37.8	26.0
VI.....	1929	3	(Scores—68, 28, and 9)	
	1930	12	31.8	20.7
	1931	12	33.5	18.2
	1932	8	37.8	23.7
	1933	7	17.8	15.9
No choice given.....	1929	1517	37.5	23.5
	1930	1329	37.1	23.2
	1931	2257	33.6	22.7
	1932	2798	31.5	21.7
	1933	3369	36.8	23.4

scale, with levels of scholastic aptitude. Since success either in training or in occupational work probably is not

should conform *exactly* to norms, standards, or hierarchies.

The data for occupational choices

classified by C. A. R.'s are presented in standard deviations of C. A. R.'s for Tables III and IV for men and women each of the years 1929-1933 inclusive.

TABLE IV

Summary of the number, mean and standard deviation of the College Aptitude Rating of senior women for each occupational class for each year

OCCUPATIONAL CLASS	YEAR	NUMBER	MEAN C. A. R.	STANDARD DEVIATION
I.....	1929	62	55.8	26.2
	1930	168	58.5	22.7
	1931	212	54.6	24.3
	1932	222	53.0	22.3
	1933	176	55.1	23.0
II.....	1929	2283	45.4	22.0
	1930	2540	47.4	22.4
	1931	3569	44.6	22.5
	1932	3937	42.9	22.1
	1933	3888	45.6	22.3
III.....	1929	1141	40.4	22.1
	1930	2255	39.8	21.6
	1931	3359	37.5	21.6
	1932	3252	38.1	21.8
	1933	3243	42.3	22.2
IV.....	1929	19	36.2	20.9
	1930	243	35.2	20.8
	1931	179	27.6	18.7
	1932	231	31.7	21.2
	1933	321	31.9	18.3
V.....	1929	2	(Scores—18 and 4)	
	1930	7	43.5	20.3
	1931	11	40.7	18.5
	1932	11	31.7	15.2
	1933	16	23.7	20.7
VI.....	1929	—	—	—
	1930	—	—	—
	1931	2	(Scores—43 and 7)	
	1932	—	—	—
	1933	—	—	—
No choice given.....	1929	1704	45.6	24.4
	1930	1148	43.0	24.6
	1931	2203	38.9	23.2
	1932	2854	37.9	23.1
	1933	3291	42.1	24.2

separately in terms of the number of seniors in each group, the means, and Although the means for group I are uniformly higher, for all years, as

compared with the other groups, yet the differences among the groups do not present the type of sharp differentiation or hierarchy found in the original analysis of Army Alpha data. Actually, the mean C. A. R. for high school seniors choosing occupations in group I for all years is lower than the mean C. A. R. for freshmen enrolled at the University of Minnesota. An inspection of the distribution of C. A. R.'s (not given in these tables) shows that many low aptitude students are selecting "high" professions such as law, and, conversely, many high aptitude seniors are selecting occupations requiring lower occupational intelligence than they possess. For the men, there is an upward trend present in all groups for the 1933 data. For the women there is a higher average C. A. R. for group I than for the men. The "no choice given" group is significantly lower for men but not for women. For group V there is a decreasing mean for both men and women, especially for women, although the latter may be due to the small number of cases.

GUIDANCE INEFFECTIVE?

If it is reasonable to expect a hierarchy in the vocational choices of high school seniors as a result of guidance, then one must conclude that guidance has not been effective in Minnesota in bringing about a conformity of choice and level of academic aptitude as measured by C. A. R. Within the limitations of this study of one type of hierarchy of aptitudes, it has been shown that students continue to make choices with little regard for the one important qualification for vocational training; such a state of affairs may be

explained by the fact that they have had no opportunity to acquire such necessary information.

Despite the known facts of unemployment with the resulting intensity of competition and rigidity of occupational selection, these seniors continue to choose on the basis of desire rather than aptitude. Guidance workers are not presenting the facts of occupational qualifications and intelligence. It is indeed regrettable that high school seniors are not given assistance in diagnosing and evaluating their vocational possibilities in terms of this one known qualification for successful occupational training.

The large number of seniors who have recorded no choice may, or may not, be a hopeful sign of effective guidance. One would want to believe that these "no choices" indicate a period of transition between unwise choices and choices made on the basis of adequate guidance; that the indecision indicates that counselors had inculcated a state of suspended choice as the first step in readjusting these students to their limitations. Perhaps some of these definite choices reported really mask a similar state of indecision induced by counselors. But such an interpretation of these data is more apt to be a result of wishful thinking. The illusion of perfection is not easy to dissipate; students, and possibly counselors themselves, still refuse to see the psychological and economic bogs, barriers and pitfalls in that well-known path from the log cabin to the White House. They have yet to learn that opportunities for occupational success are available *only* for those who have the necessary qualifications for utilizing those opportunities.

Ending the Spoils System

Many have cried "Shame!" at spoils politicians, but Dr. Coffman's Commission on Public Service Personnel, in its Report, summarized here, describes a new system by which men of ability and promise will be attracted to federal, state and municipal public service.

A NEW "career system," designed to attract the best man power to federal, state and local governments is recommended in the final report of the Commission of Inquiry on Public Service Personnel, made public recently by Dr. L. D. Coffman, president of the University of Minnesota, and chairman of the commission.

"The spoils system, the use of the public payroll for charity, indiscriminating criticism of public employees, and the failure to adjust our ideas, our governmental institutions, and our public personnel policies to the social and economic changes since the Civil War," are held primarily responsible by the commission for the inability of our governments to compete with private business, industry, and professions, in attracting their fair share of the nation's best man power.

The report, which has the unanimous approval of the commission's members, is based on a year's study. Members of the commission, in addition to Dr. Coffman, include Louis Brownlow, director, Public Administration Clearing House, Chicago, Ill.; Ralph Budd, president, Chicago, Burlington, and Quincy Railroad,

Chicago; Arthur L. Day, vice president, Corning Glass Works, Corning, N. Y.; and Charles E. Merriam, chairman, Department of Political Science, University of Chicago, Chicago, Ill.

Dr. Luther Gulick, director, Institute of Public Administration, Columbia University, is director of research and secretary of the commission.

The commission's inquiry was confined to appointive administrative services, where the great bulk of government work is carried on, and did not include the elected legislators and councilmen, boards and commissions, mayors, governors and other elected officials, or the judiciary and military forces.

In advocating the establishment of a career service, which in the judgment of the Commission is the required next step in the history of American government, the report says:

"By a career is meant a life work. It is an honorable occupation which one normally takes up in youth with the expectation of advancement, and pursues until retirement. A career service in government is thus a public service which is so organized and conducted as to encourage careers. A career service system is the aggrega-

tion of laws, organization, rules, and procedures by means of which the career service is maintained and developed."

"We do not believe," the Commission states, "that the public service should first be minutely classified into pigeon-holes, for which the civil service commission tries to find men who exactly fit each compartment, but rather that the service should be divided into ladders, for which young men are normally selected to start on the bottom rung. These ladders must rise from different points depending upon the kinds of service, and an opportunity must be provided for advance at different rates of speed and for transfer from one ladder to another."

CORRUPTION OF DEMOCRACY

Emphasizing the advantages of the career system over the spoils system, the report states the latter is not the doctrine of the fathers of the constitution, but rather "a corruption of democracy, introduced into the American government between 1810 and 1924."

The commission holds that while the belief that political parties cannot exist without spoils is largely responsible for a defeatist attitude and prevents annihilation of the abuses, the spoils system "is of no value to government nor, in the long run, to political parties, and has been abandoned in many parts of the United States, and in most of the democracies of the world."

The report lists 10 fallacies in American thinking on government per-

sonnel, which profoundly influence current American personnel practice:

1. To the victor belong the spoils
2. Government work is so simple that anyone can qualify
3. Charity begins on the public payroll
4. Patronage is the price of democracy
5. The most efficient public servant is the worst one
6. Permanency of tenure is the cure for spoils
7. Real reform can be achieved without bringing the top positions under civil service.
8. Home town jobs should go to home town boys
9. Public service is always less efficient than private enterprise
10. The prohibition of specific abuses will eliminate the spoils system.

Outstanding among the measures urged for immediate action are

1. Extension of the federal civil service system to include:

- (a) All postmasterships
- (b) Deputy collectors of internal revenue and deputy marshals
- (c) Such professional and skilled services of the regular departments as are now excepted
- (d) The personnel of federal emergency administrations, boards and agencies.

2. The repeal of:

- (a) All general legislation prescribing residence requirements or geographic apportionment of appointments
- (b) All national, state and local measures setting a definite term for appointive administrative officials

- (c) Section 213 of the Economy Act of 1932, which requires the discharge of one member of a married couple when both are employed in the federal service.

3. Amendment of veteran preference laws so that they will adequately recognize the war service of veterans without conflicting with merit principles or the efficiency of public service.

4. Establishment or designation of a personnel officer in every department or agency of adequate size in federal, state and local governments.

5. Increase in the appropriations for personnel administration and for the Civil Service Commission in the federal government, and in state and local governments, where necessary for the adequate maintenance of the merit system.

6. Extension of classification and salary standardization to the federal services outside the District of Columbia.

7. Extension of the merit system to the personnel of state and local governmental agencies spending federal funds, under standards supervised by the U. S. Civil Service Commission.

Prominent among the general recommendations of the Commission are:

1. Establishment of a career basis for the general appointive services through sub-division into five broad career services, as follows:

- (a) The administrative service
- (b) The professional and technical service
- (c) The clerical service
- (d) The skilled and trades service
- (e) The unskilled service.

These would take the place, in recruitment, of present minute civil service classifications.

2. Provision in each career service group for:

- (a) Recruitment geared to the existing American educational system
- (b) Competitive entrance examinations for all positions
- (c) Certification by accredited professional associations and by legally established professional bodies for all professional and technical positions
- (d) Establishment of a probationary period of not less than six months before an appointment becomes permanent
- (e) Advancement on the basis of merit to the highest non-political positions including many not now under civil service
- (f) Adequate provision for transfer both within each career service group and from one group to another
- (g) Higher salaries for the top positions
- (h) Adequate retirement and pension provisions.

3. Provision by personnel officers and general administrators to prevent stagnation of personnel through:

- (a) Developing contacts between superiors and subordinates
- (b) Encouraging training in the service
- (c) Maintaining service records
- (d) Facilitating transfers particularly during early stages of an employee's career.

4. Provision for security for public employees against dismissals or demotion for trivial, personal, religious, racial, political, or other arbitrary or extraneous reasons, provided such legislation guaranteeing tenure is enacted in conjunction with:

- (a) A system of recruitment, appointment and probation which ~~will be~~ ^{will be} the appointment of ~~the~~ ^{the} ~~most~~ ^{most} capable persons only
- (b) Periodic ~~service~~ records with a procedure for transfer, adjustment, and reduction of pay with reduction of service
- (c) The pensioning of superannuated employees
- (d) An adequate administrative procedure for discipline or discharge from the service.

5. Establishment of coöperation between federal personnel administration and state and local administrations through such measure as:

- (a) Joint use of eligible lists
- (b) Joint preparation and conduct of examinations
- (c) Development of technical studies.

6. Establishment of similar coöperation between state and local personnel agencies.

7. Adoption in states and local units of the short ballot which we have always had in the federal government.

8. The modernization of uneconomic and unworkable small units of local government through:

- (a) Consolidation of boundaries and positions

- (b) Establishment of joint services
- (c) Use of central technical assistance, particularly in maintaining personnel administration.

9. Undertaking by public personnel officers throughout the country of far more extensive research in the technical problems of personnel administration, wherever possible in coöperation with qualified specialists in private business and in the universities.

The commission, in an appendix to its report, estimates that in 1932, there were roughly 3,278,500 government employees in the United States, distributed as follows:

Federal.....	934,000
State.....	252,000
Municipal.....	591,500
County, township and district.....	312,000
Public education.....	1,189,000

The Commission of Inquiry on Public Service Personnel is a non-political citizens' body of investigation, appointed, with the approval of President Roosevelt, by the Social Science Research Council. Work of the Commission was financed by the Spelman Fund. Having been established, the Commission became a temporary, independent body. Its report is made, not to any of the organizations which sponsored it, but directly to the American people. The report, entitled "Better Government Personnel" is published in book form by Whittlesey House.

Women Workers Through the Depression

REVIEW BY ELIZABETH SLOCOMBE, *New York*

WOMEN within the last generation have entered in increasing numbers higher professions and executive positions in industry. These positions were hitherto filled solely by men. Tremendous hard work, persistence, and will power have been required to do this. How have these women who have struggled so hard fared during the depression? Has their experience been such as to encourage young women of today to follow them?

They have fared very well. Twenty-six percent are earning as much in 1933 as they were in 1929, and 13 percent are earning even more. The average salary has only decreased from \$3035 to but \$2428.

These figures are drawn from a study by the American Woman's Association. It studied 1350 of its members by questionnaire and interview.¹ A similar study was made in 1931. The typical member of the Association is mature and well established in her work, with education far above the average. Seventy-nine percent of the 1350 women studied are over 40 years of age, 81 percent are unmarried, 30 percent have had more than 20 years experience, their salaries in 1933

ranged up to \$13,875. They represent 90 occupations.

These women are intelligent, hard working, capable, and know the "ins and outs" of the working world. Yet they have been decidedly affected by the depression. Twenty-nine percent have been unemployed some time during 1929 to 1933, most of them unemployed between one and two years. But only 11 percent of the total are unemployed at the present time. This compares with 23 percent for all women in New York City. Women in all salary groups have been affected though those in the middle ranges seem to be somewhat more secure. Comparing these figures with the previous study of 1931, unemployment has risen from 6 to 11 percent, instability of work has increased from 10 to 33 percent. 1933 was the worst year both to obtain new work and to lose old. Although these figures prove the effects of the depression beyond all doubt, they are very much more favorable than available figures for the rest of the population. This is explained not merely on the grounds of superior ability but also superior adaptability.

WOMEN ARE ADAPTABLE

Women have an advantage over men. Their interests are much more scattered than men's. Women have

¹The results of this study by the American Woman's Association, Lorine Prutte, Editor, has been published by the Macmillan Company, New York (pp. 164, \$2).

often been ridiculed for their lack of concentration on one interest but now this has helped them. Many members of the American Woman's Association have changed their occupations and have prospered. Women have the further advantage of "doing anything" without losing prestige whereas men do not feel that they can do this. Apparently wide interests and scattered abilities are better than one perfected ability no matter how much one may excel in that particular ability. The 13 percent of women who have actually increased their income during the depression are mostly those who have changed their occupations.

A difference between those members who have come well through the depression and those who have not is that the former have kept circulating. They have increased rather than decreased their social contacts. Wall flowers have no more chance in the economic world than they have on the dance floor. The woman who hides herself in a hall bedroom with her petty tragic economies is destined for failure.

But those who kept the same job show a greater stability in salary. Those who changed had a greater chance for decrease as well as increase. Often they got the decrease. The average salary of the stable worker was \$1000 higher than that of the unstable worker. This finding is influenced by a large number of school-teachers. If these had been separated this result might have been different.

Long experience does not count as much as might be expected among these working women. During the

first ten years of experience there is a big increase in salary but it increases much more slowly after that. Among individuals there was no clearcut relationship. Some of the highest salaries were paid to women with little experience and some of the lowest to women with long experience. Small numbers make this part of the study rather unreliable.

MARRIED AND OLDER WOMEN

The older woman does not suffer as much in the economic world as might be expected from recent talk about the plight of the older worker. Woman's economic value increases up to 50 years but after that she must seriously meet the competition of younger and lower paid women. It seems likely that men in similar positions are in much the same difficulty. Of those under 40, 15 percent of women were unemployed. Only 9 percent of those over 40 were unemployed.

Discrimination against the married woman is of vital importance because it is regarded as the opening wedge to bar all women from working. The most startling difference between the unmarried worker and the married worker is the tendency of the latter to go into business for herself. Married woman make up only one-fifth of the salaried workers but one-half of the independent workers. Why is the married woman so much more apt to go into her own business than the unmarried woman? The most important reason, according to this study, is that she has found it increasingly difficult to get work due to the discrimination against married women. She feels that she has greater protection

in working for herself. Apparently if women want to work, they can't be stopped.

The question of woman's right to work is naturally of great interest to a club with such a membership. Without expounding on the subject, some very salient facts are offered which should be faced by all those who advocate excluding women from the economic world. First, women workers are bread winners. Not even married women with independent businesses are working for "self-expression." They are working for financial improvement. They support themselves. Only 2 percent of unemployed women returned to live with their families during the depression. Over 60 percent drew on savings and 26 percent secured loans. They are, therefore definitely dependent on their salary and suffer real hardship when out of work.

Not only are they supporting themselves but also others as well. In 1929 they had an average of 1.9 dependents and in 1933 an average of 2.4, adults comprising 75 percent of dependents. This increase has occurred in spite of the fact that many of these women were supporting parents who have died in the meantime. Women are therefore a very definite part of the economic picture, they support others just as men do, and any discrimination against them is unjustified.

WOMEN AND SECURITY

Even more far reaching than these conclusions are those which point to the urgent need for social legislation for all workers. Sixty percent of the

women had suffered a decrease in income during this period, but 97.7 percent had radically cut their expenditures. Fifty percent of them had practically cut their expenditures in half. What does this mean in terms of the flow of money and business recovery? Granting the group is highly selected, is not this a startling exposee of what has been happening to money in America in the last four years. They saved more. When asked why their reply was very human, fear of a rainy day ahead. Even women who gain so much through rugged individualism have become alive to the crying need for some sort of social legislation. Nothing can start money flowing again until the job for tomorrow is guaranteed workers both men and women. This study brings out in bold relief the startling extent to which fear operates.

In treatment of material, facts are presented simply and clearly in this study. It is unfortunate that some of the numbers in groups are small. It is also unfortunate that in the study of stability of work teachers were not separated out. The high percentage of teachers affects many of the results. It would be valuable in many cases to know the salary which most workers in a group received rather than to know the average or middle salary. But these are minor points.

The American Woman's Association has brought out one of the most valuable studies of workers during the depression. They have done far more. They have told simply and understandingly an amazing story of American women.

Personnel Books

MANUAL SKILL

By J. W. Cox. London: Cambridge: At the University Press; New York: The Macmillan Co. 1934, 247 pp., \$5.00

Reviewed by CHARLES S. SLOCOMBE, *New York*

How to train for skilled and semi-skilled work, and the abilities necessary for skilled trades and the engineering profession, is the subject matter of a recent book by Dr. J. W. Cox of the British National Institute of Industrial Psychology.

If new workers are trained according to the principles worked out by Mr. Cox they will learn the job they are being trained for much faster than usual, and when they are transferred to other work they will, without any training on the new job, start off with more than usual ability.

The vital importance of this to many industries with changing styles, with short-term buying requiring changing workers from one process to another, etc., is enormous. It is important not only in the preventing delays of such transfer consequent upon slowness of workers, and helping to reduce labor costs through higher output per worker, but also in employee-employer relations. In some plants the moving of workers from one job to another is a source of friction that up to now has not been eradicated. But if employees are trained so that they have confidence

that on going into a new job they will be able to earn as much as on the one they are leaving, they will have less cause for grievance.

It has always been found that training and practice on one mechanical operation does not help to develop ability in a different mechanical operation. So psychologists have always said that it is necessary to train for each job anew.

Mr. Cox made a very thorough analysis of the mental and muscular activities involved in different types of mechanical assembly. As a result he designed a set of eleven lessons and exercises to constitute a training course on assembling a lamp socket. This course included:

- a. Matters of general method, arrangement of parts on the bench, manner of holding parts, order of assembly.

- b. Eye observation exercises,—what to look at when assembling, how to note shapes and how parts will fit.

- c. Finger exercises, with special attention to the "feeling," in the fingers, how much pressure to exert, how to feel when a screw thread is crossed, etc.

d. Exercises in control of attention and muscles and how to make the most economical use of them.

e. Practice in applying these exercises to normal working conditions.

The main difference between this method of training and the usual one is that Mr. Cox selected the most critical and important factors in the job and trained for ability in those. The usual mechanical training consists in learning to do the job over and over again until perfection is obtained. By this usual method, time is wasted in repeating parts of the job which are already learnt instead of concentrating all the time on learning the most difficult parts.

To check his results Mr. Cox trained one group of people by his new method and another group by the usual method. He found that (a) the new method group picked up speed much faster than the others, even though they only repeated the operation 85 times instead of 440 times under the usual training method.

(b) Those trained by the new method when transferred to other jobs started off with much greater ability and at a faster rate than those trained by the usual method.

(c) Not only was the new method group of superior ability at every point in their curve of performance, but their potentiality for further improvement was much greater.

Dr. Cox also reports the results of his further studies on the type of test necessary for the selection of men and

boys suitable for mechanical trades and professions.

Tests of ability to think in mechanical terms with levers, pistons, and wheels were described by Dr. Cox in his book on *Mechanical Aptitude* published in 1928. These have been found highly successful in England in the selection of engineers, mechanics, and in the trade schools.

Dr. Cox now shows that for jobs of a simpler nature such as routine assembly operations, a set of simple manual tests is all that is necessary. He also shows that these simple tests give better results than the more complicated ones. But he says that these simple tests are not good for the selection of engineers and more skilled mechanics.

He shows also that while a minimum of intelligence is necessary for either type of work, intelligence tests do not select good engineers, mechanics, or assemblers.

Dr. Cox's book is in many places highly technical both in its language and the statistical methods used. To those unfamiliar with this language and these methods it is somewhat formidable. But the many charts and more direct language of the last and more important half of the book are quite understandable by the personnel director with a practical knowledge of training methods.

Dr. Cox's work is the most important contribution to the study of manual skill that has appeared for ten years.

THE ART OF LEADERSHIP

By Ordway Tead. New York: McGraw-Hill, 1935, 300 pp., \$2.50

Reviewed by F. L. ROWLAND, Life Office Management Assn.

One hears today on every front the urgent call for more intelligent leadership in every field of human interest—political, economic, educational, religious, social, and scientific. At the same time, we are witnessing a rebellion against false leaders who have guided us along dubious paths. In despair, some European nations have bowed to the autocratic rule of command as an alternative to beneficial leadership.

With this wide recognition of the need for more and better leaders, it seems obvious that the problem should be approached, first, by defining the true meaning of leadership and, secondly, with a determination of the extent to which the technique of leadership can be taught.

Mr. Tead, who, since his first publication appeared in 1918, has been recognized as an authority in personnel administration, has chosen a most appropriate time for presenting this much discussed but little understood subject.

With a thorough appreciation of the philosophical and psychological factors in motivating human action, he has combined a literary style which reflects an appreciation of the teaching art.

While the author clearly indicates a recognition of the "born" qualities of leadership, he has succeeded in convincing his readers that much can be gained by an analysis and understanding of the technique of leadership. His statements of principles are sup-

plemented by interesting practical problems and suggested solutions which add materially to the interest and ease of reading.

Some years ago an executive of a large financial institution, who had recently been made President, told this reviewer that one of the hazards of his new position was due to the difficulty he was experiencing in checking up on himself. He said he found himself in his new position quite free from criticism and blame for the consequences of what he knew were his own short-comings, and he felt the demoralizing influence of patronage and sycophantry. "The Art of Leadership" would have proven an admirable antidote to this leader who honestly desired to check up on himself and increase his effectiveness in the performance of his functions.

The author is to be particularly commended for those chapters dealing with "Qualities necessary in leadership." Any actual or potential leader can do well to consider thoughtfully the list of essential qualities here presented and to ponder over the extent to which self-cultivation and formal training can develop and strengthen those traits which may or may not be now possessed.

The author has courageously and with becoming tact, considered the importance of sex hygiene in expending leadership energy. He states:

"Inextricably and in ways we do not fully understand, the total supply

and manner of expression of the energy of both men and women are inter-related with and strongly supported by their sexual energy. Energy is mysteriously fed from the springs of sexual desire. Greater total energy frequently means a stronger sex urge—with its consequent hazards for the leader. Where this is true, there is great need of assurance that sexual interests contribute effectively to harmonious living and do not become a divisive force draining energy away from an integrated expression. . . . The personal hygiene of leadership must take the most candid account of the losses to its effectiveness which can develop from this quarter. The more completely unified, wholesome, and personally felicitous the love life which the individual enjoys, the more nearly

will his or her total behavior tend to be free of detracting mental influences and maladjustments."

The author seemingly has not directed this book to any particular class of readers. Its easy reading style, with the numerous interesting illustrations, should give it a wide popular appeal. To the leaders, both actual and potential, in every field of organized effort, it should prove a valuable guide. The followers, too, will gain many valuable suggestions for the selection of their leaders, the student of personnel administration will recognize it as a contribution to the authoritative literature on the subject, and, finally, it seems to be admirably adapted as a text on an important phase of personnel activities.

News Notes

BUSINESS LEADERS TO BECOME CONSULTING PROFESSORS

Stanford University, California

The Board of Trustees of Stanford University plans the appointment of consulting professors in the Graduate School of Business as a means of recruiting for the School the wisdom and experience of business leaders on the Pacific Coast. The arrangement is regarded as one of the most important innovations in professional education since the establishment a quarter century ago of clinical professorships in schools of medicine.

Under the arrangement, consulting professors of banking, marketing, public utility management, industrial management, finance, and so forth, will be appointed to give occasional lectures to classes and seminars, consult with the regular faculty of the Graduate School of Business on technical problems, and to counsel, in certain cases, advanced students engaged in research.

It is planned to make a distinction in the academic ranking of the consultants along functional lines. Only outstanding leaders in business and finance will be invited to become consulting professors. Outstanding staff executives, such as treasurers, comptrollers, sales and production managers, personnel managers, etc., may be invited to become associate

consulting professors. Assistant consulting professors will comprise outstanding junior executives who show definite promise of attaining major executive positions. Occasionally consulting instructors may also be appointed; these might be recent graduates of the Graduate School of Business who show real promise and whose experience would be more and more valuable to the School.

In commenting upon the plan, Dean J. Hugh Jackson of the Graduate School of Business stated that this arrangement is one "that will give the men and women training for business not only intimate association with the trained experts making up the regular faculty of the School, but will also give them much closer association with those business leaders who are actively on the 'firing line' of industry and of finance.

"The plan is one we have had under contemplation for nearly a year. It has been discussed with leaders in business education, and also with prominent executives, and everywhere has been most heartily approved. We are confident that business leaders themselves will find it a very interesting and worthwhile association, and I know that the plan will prove of untold value to our School. We are delighted at the prospect of having outstanding leaders in business and industry thus officially connected with the work of our Graduate School of Business."

PHILADELPHIA PLANS AN ADJUSTMENT SERVICE

In May an open working conference will be held in Philadelphia to plan the early establishment of an Occupational Adjustment Service in that city.

Dr. Joseph H. Willitts, Dean of the Wharton School of Finance and Commerce is chairman of the committee drawing up plans.

Coöperating organizations in the sponsorship of this conference are Philadelphia Chamber of Commerce, Board of Public Education, Pennsylvania State Employment Service, Philadelphia Personnel Association, Vocational Guidance Association of Philadelphia and the Central Labor Union of Philadelphia.

Preliminary meetings and committee sessions have been held in which more than 250 employment specialists and educators have coöperated. Dr. Ewan Clague of the Philadelphia Community Council has prepared statistics showing the changing trends in occupations, the shift to service occupations in contrast to regular industrial jobs. He has also shown the enormous yearly increase of potential wage earners in contra-distinction

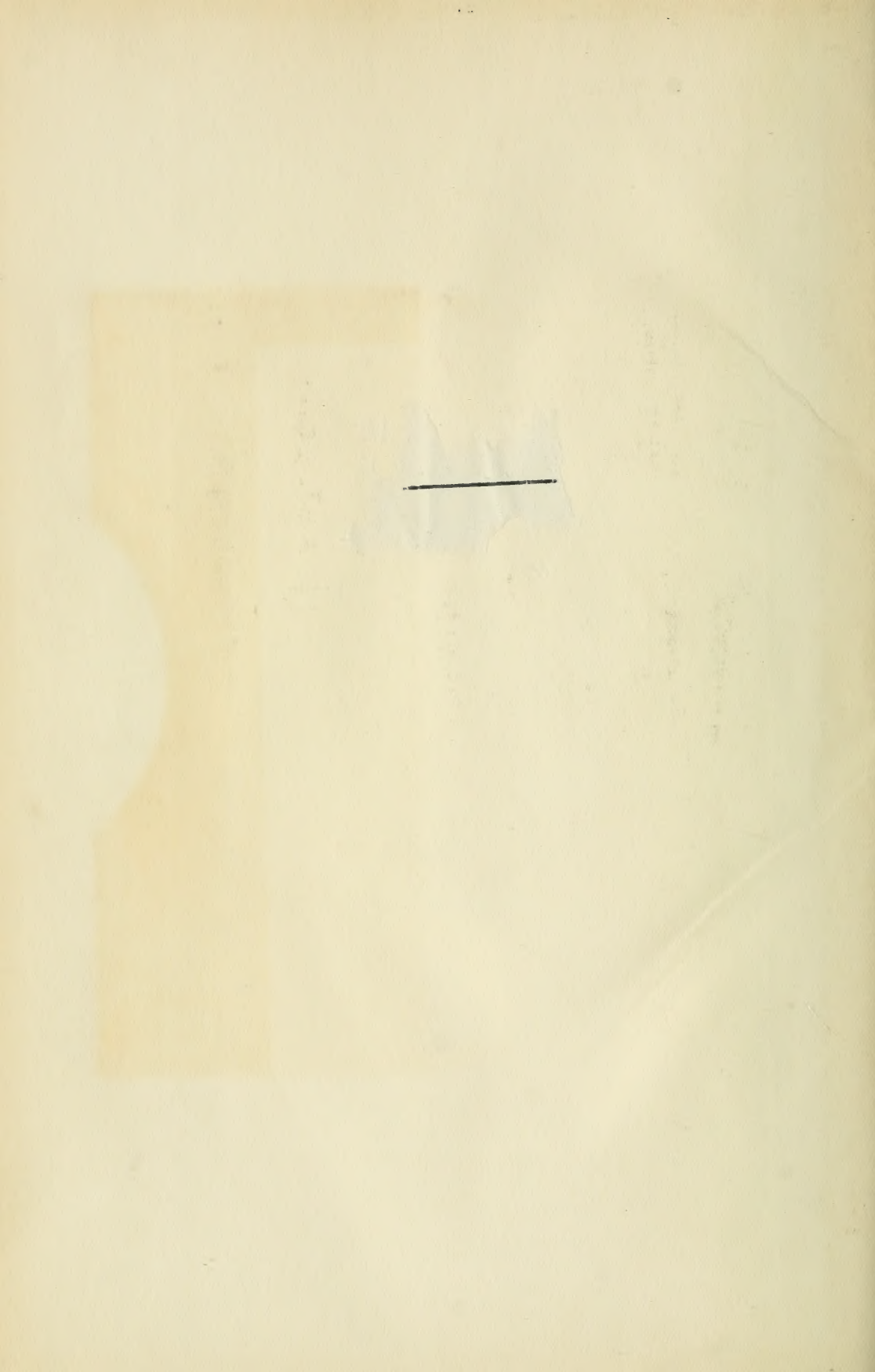
to the yearly decrease of available positions.

Assistance in developing the program is also being given by Col. Robert I. Rees, Frank W. Persons, Dr. M. R. Trabue, Dr. Arthur J. Jones, Wm. F. Paterson, John A. Phillips and H. M. Hoover.

SIXTH ANNUAL INSTITUTE FOR EDUCATION BY RADIO

For the year 1935, the Fifth Annual Assembly of the National Advisory Council on Radio in Education is combining with the Sixth Annual Institute for Education by Radio in meetings to be held at the Ohio State University, Columbus, Ohio, on May 6, 7, and 8.

There will be seven sessions in this conference and discussions at each. The persons who will participate in the program are thoroughly familiar with educational broadcasting problems in the college and university, in the school, and in the commercial field. Because of the interest aroused by the hearings conducted by the Federal Communications Commission last fall, and by the discussions that have resulted therefrom, this conference will be timely.



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